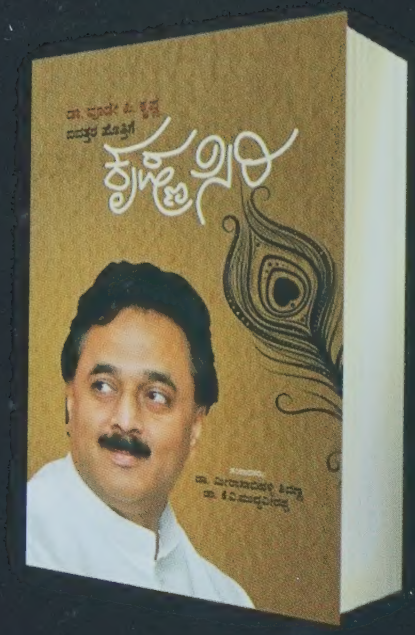
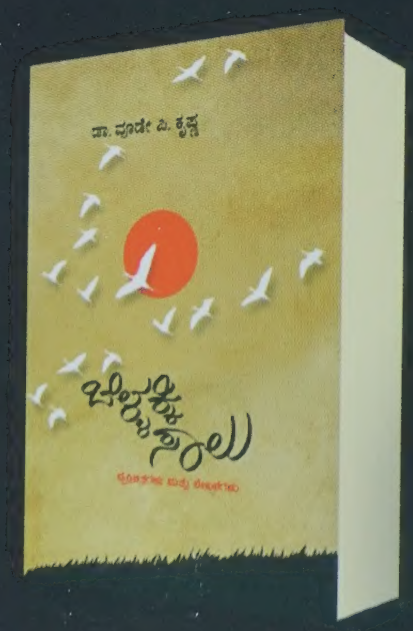
Beyond The Boundaries

Letters • Articles • Speeches • Interviews

Dr. Wooday P. Krishna





Dr. Wooday P. Krishna

Dr. Wooday P. Krishna is the Honorary General Secretary of Seshadripuram Educational Trust which caters to the educational needs of over 20,000 students from kindergarten to Ph.D. level through its 25 institutions. He is a fine blend of an engineer, educationist, social activist and humanist.

Born in 1963 in Bangalore, he hails from a family of freedom fighters. After receiving his early education at the famous Sri Ramakrishna Vidyashala, Mysore, he earned master's degrees in Mechanical Engineering and Law. He followed this up with a Ph.D. in Business Administration.

Dr. Krishna is a Chartered Engineer specializing in arbitration. He has served as Member of the State Disaster Management Authority, Govt. of Karnataka, in the rank of Minister of State. He is presently National President of the Indian Institution of Production Engineers .

He is a noted social activist occupying important positions in renowned service organizations like the Indian Red Cross Society, the Tuberculosis Association of India, BharathSeva Dal, Gandhi Peace Foundation, Karnataka Gandhi Smaraka Nidhi and the Youth Hostels Association of India.

Dr. Krishna has been conferred with Fellowship of the Institution of Engineering and Technology, U.K., which is considered as one of the top international recognition in the Engineering field. He is a recipient of the prestigious Indian Red Cross Gold Medal (2012), the highest National Award for Humanitarian Work, from the President of India. He has received three State Awards from Govt. of Karnataka including State Award for Empowerment of People with Disabilities (2008) and State Rajyotsava Award (2004) for Social Service. He has also received Kempegowda Award (2002), a Civic Honour from Bruhat Bangalore Mahanagara Palike, for contribution in the field of Education.

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Letters • Articles • Speeches • Interviews

Dr. Wooday P. Krishna

CVG BOOKS
Bengaluru

Beyond The Boundaries
Letters, Articles, Speeches and Interviews
of Dr. Wooday P. Krishna

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Dedicated
to my beloved Parents
Sri W. H. Puttiah
&
Smt. Doddammaiya

Preface

On my completion of 50 years of age some friends and well wishers have embarked upon presenting me with a Felicitation Volume. They asked me to spare my writings, if any, for inclusion in the book. Then I searched my collections and handed over some writings to Dr. Meerasabihally Shivanna, one of the editors. Majority of them were in English and a few in Kannada. The articles were written during my stay at Sri Ramakrishna Ashrama in Mysuru upto my present position of Honorary General Secretary of Seshadripuram Educational Trust. Few were written while I served in different capacities in many public service organizations, spanning over thirty years of my life.

Dr. Shivanna who perused these writings assorted them under four to five heads. While some articles were kept as softcopy, others were typed before handing over to me in a book form.

Some were published in readers columns of Deccan Herald, The Hindu and The Indian Express dailies. I had voiced my concern on many public issues and against wrong decisions of the government boldly. Public concern was my main intention in all the letters of whom some forty letters are selected for publication, among the hundred and odd.

I have expressed my thoughts in several articles, while occupying positions of responsibility in the Indian Red Cross Society, Gandhi Smaraka Nidhi, Gandhi Peace Foundation, The Institution of Engineers (India), The Tuberculosis Association of India, State Disaster Management Authority besides engaging in many social service organizations including a large educational organization.

The speeches rendered in many conferences are also included. Few interviews and speeches depict my line of thinking and my concern on the well being of society.

Basically I am an engineer and my initiatives in preparing some technical and scientific articles jointly with few experts and friends are also included. These definitely present my facets of thinking.

My special thanks and sincere gratitude to Justice Dr. M. Rama Jois for his erudite foreword.

I sincerely thank Dr. Meerasabihally Shivanna for assorting the letters, articles, speeches and interviews and for projecting my thoughts to the reader and Mr. G.S. Ujjanappa senior journalist from Chitradurga and Prof. Bhargavi V.R. for their meticulous correction of proof mistakes. I remember Dr. K.V. Muddaveerappa, Prof. H.B. Shivakumar, Dr. K. Nagabhushana who toiled along with them in making the book impressive.

Sri Krishnamurthy of M/S. SVAN printers deserves my sincere thanks for his creativity in designing and printing the book neatly.

4th May, 2015
Bengaluru

Dr. Wooday P. Krishna

Foreword

Dr. Wooday P. Krishna, a renowned public figure of Bengaluru and Honorary General Secretary, Seshadripuram Educational Trust, owning highly reputed educational institutions in the city of Bengaluru, has requested me to write a foreword to the book authored by him titled *`Beyond the Boundaries'* comprising of letters, articles, speeches and interviews by him on various subjects as and when occasion arose and also speeches made by him on various occasions and the reports of his interviews containing questions and answers.

On a cursory glance of all his writings and valuable services rendered by him, I find that they are of enduring nature. It is in evidence that he is an intellect, educationist, environmentalist, social worker and who is very sincere in doing whatever he undertakes to do. I shall record in this foreword, a few important contribution made by him which have earned him a good reputation.

On education, in which he is deeply interested, he has referred to Barthruhari, who was a king of Ujjain, who relinquished his position as a King and wrote *`Neeti Shataka'* comprising of one hundred *slokas* through which he gave invaluable knowledge and wisdom to the entire humanity. In particular, his exposition on the value and merit of *'Vidya'* is immortal. In the case of Unnikrishnan Vs. State of Andhra Pradesh [1993 (1) SCC 645] before the Supreme Court, where the question for consideration was whether education was a

fundamental right as it was not specified in any of the Article in Part-III, *Barthruhari's* exposition in a *sloka* on education was quoted by me in support of the fact that education was fundamental right. This was accepted by the Supreme Court. Relevant portion reads:-

"The importance of education was emphasized in the *'Neetishatakam'* by *Bhartruhari* (First Century) in the following words:-

Education is the special manifestation of man;
Education is the treasure which can be preserved
Without fear of loss;
Education secures material pleasure, happiness and fame;
Education is the teacher of the teacher;
Education is one's friend when one goes abroad
Education is God incarnate;
Education secures honour at the hands of the State, not money;
A man with education is equal to animal.

The judgement led to the amendment of the Constitution by way of incorporating Article 21-A in Part-III of the Constitution conferring fundamental right to education. This proves the valuable thought of Dr. Krishna on the importance of education. Therefore, he has rightly stated that investment on education creates human capital. He adds that revamping technical education is essential for the progress and prosperity of the Nation.

He has rightly said that mantra for excellence was good thinking. His words are:

"Good thinking creates the foundation for good results. Poor thinking can produce only negative results. Good thinking produces some progress but great thinking produces great progress. You cannot change your results without changing your thinking. Remember the adage 'As you sow, so you reap'. If you need great results, you need to sow great thinking".

On the topic of minority, his views have been forthright.

"Unfortunately It is high time that the Government should put down these vested interests without any reservations whatsoever before tackling the issue of reservations as such in all its bearings."

On the importance of discipline, he has stated in an article thus:

"No greatness can be achieved without an aim without discipline and without hard work. Unless these virtues are practiced, there can be no expertise".

Referring to the fact that how he got inspiration from Swami Vivekananda he has stated:

"My mind goes back to the wonderful days I spent at Sri Ramakrishna Vidyashala, Mysore, between 1975 and 978. It was here that I first heard of the holy trinity Sri Ramakrishna, Sri Sarada Devi and Swami Vivekananda. Vidyashala was unique to us all in the sense it tried to translate into action the philosophy of education envisioned by Swami Vivekananda. It was here that I was exposed to basic human values, self-reliance, team spirit and leadership action".

On innovation and teaching, he says:

"Innovation and technology holds the key for progress and development in knowledge economy. Our dear Institution will continue to strive hard to bring laurels to the nation. It is well known that havoc has been caused to our National life by the introduction of Macaulay System of Education as is evident from his speech made by him in British Parliament on 2-2-1835".

The author has quoted his speech which reads:-

"I have travelled across the length and breadth of India and I have not seen one person who is beggar, who is a thief such wealth I have seen in this Country, such high moral values, people of such calibre, that I do not think we would ever conquer this country, unless we break the very backbone of this nation, which is her spiritual and cultural heritage and therefore, I propose that we replace her old

and ancient education system, her culture, for if the Indians think that all that is foreign and English is good and greater than their own, they will lose their self esteem, their native culture and they will become what we want them, a truly dominated nation " and has lamented as follows:-

"The strategies that he evolved were to replace India's ancient education system with his own by which he successfully managed to produce large-scale clerical-minded educated class in India. He was effective in making India a truly dominated nation. Even his leadership has been so effective that after almost two centuries we have still not been able to replace the education system established by him".

To put it in a nut-shell, on the basis of the views expressed by the author, who is an Educationist, Engineer, Management Guru, Environmentalist and all put together and more that all a teacher and social reformer, whose work and achievements are sure to remain immortal.

Coming from a reputed family, being a grandson of great freedom fighter Sri W. H. Hanmanthappa, whom I knew personally, I feel proud for his yeomen services to our National life. This book is sure to be great source of inspiration to all those who are doing or interested in doing service to the Nation.

2nd April, 2015
Bengaluru

Justice Dr. M. RAMA JOIS
Former Chief Justice of Punjab
and Haryana High Court and
Former Governor of Jharkhand and Bihar
Former Member of Parliament (Rajya Sabha)

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Letters to the EDITOR

DECCAN HERALD
Friday, June 10, 1983

A pleasant surprise

Sir, It was a pleasant surprise to the residents of Rajmahal Vilas Extension when the Forest Department officials came to their doors to offer saplings free of cost. It is indeed timely and deserves all appreciation.

The novel scheme helps to involve the people of the locality to grow more trees. I hope that it will be extended to all towns and villages in the State.

Bangaloreans welcome this constructive move and it surely goes a long way in protecting and preserving the invaluable climate of this garden city.

W. P. Krishna
Bangalore

INDIAN EXPRESS
Tuesday, August 16, 1983

Independents

Sir, - Mr. Taranath Kamath, in his letter has rightly pointed out the role of independent candidates in the elections to the legislative and civic bodies (August 4). While independents are free from all party entanglements or commitments, they are directly responsible to the public. The gesture of the independent candidates to own the responsibility squarely and boldly that too out of their own credit deserves sympathetic consideration by the voters.

A section of the public feels that the independent candidates are singular and have no support or power. This is palpably false. Weak and unworthy candidates projected by political parties however attractive the manifesto of the party be will be of little avail to the welfare of the people.

W. P. KRISHNA
30/A, 8 'A' Main Road
Raja Mahal Vilas Extension
Bangalore – 560 080

INDIAN EXPRESS
Friday, December 9, 1983

Rajyotsava

Sir, - During the whole of November, Bangalore city witnessed colourful festivities celebrating the Rajyotsava. Several meetings were held where speakers exhorted the people to reaffirm their dedication and service to the state in diverse fields. This is all as it should be.

But certain incongruities have however crept into such public celebrations. For instance, one found in many places the portraits of the late Maharaja of Mysore being adored and worshiped with all gaiety. There is nothing wrong, indeed, in one remembering and venerating the Maharaja for all his inspiring deeds on the occasion of his birth and death anniversaries. The Rajyotsava celebrations are on the other hand, specifically meant for providing a rallying point for the people of the state to unite and assert their mutual fellowship with a view to promoting the general national common weal and for holding art, music, literary and cultural festivals to bring into a focal point the flowering talents of artistes in the state.

It is, therefore, embarrassing for anybody especially for those who happen to be ardent lovers of the Maharaja to witness the fanatical zeal exhibited in hero-worship to the utter exclusion of real significance of the occasion. This is not all. Many also found the portraits of the veteran cine artiste Raj Kumar also being worshipped with floral offerings and magalara. As one who greatly admires Raj Kumar for his talents. I am sure that the embarrassment caused to be by this blind hero-worship would be fully shared by Raj Kumar himself. It may not be out of place if I say that Goddess of the state is Bhuvaneswari, who Raj Kumar himself considers to be supreme.

In this democratic age when sovereign individual rights and liberties of the citizens are daily being dwelt upon by the leaders of the society who want the country to preserve them, it is shocking to find that no single political party is out to curb such practices. How are we to build up national integration and love of our motherland if such trends are allowed to have full play on the lives of the people?

W. P. KRISHNA
30/A, 8 'A' Main Road
Raja Mahal Vilas Extension
Bangalore – 560 080

INDIAN EXPRESS
Monday, Dec 12, 1983

MONDAY MELANGE

Distorted names

The printer's devil is of common occurrence nowadays and many have come to put up with it. Howlers in publications are also becoming common. But one can never imagine name boards and foundation stones meant for consecrating the memories of worthy people carrying irresponsibly worded or stupidly misspelt inscriptions. In either case, it amounts to sacrilege. Public interest demands that such inscriptions on name boards displayed on public thoroughfares be scrupulously safeguarded with utmost care and sense of honour.

On the Raja Rammohun Roy Road in the City a very important public thoroughfare the name board near Richmond Circle reads Rajaram Mohan Rai Road. This is a clear distortion. The word 'Raja' is a title given to Rammohun Roy and cannot form an integral part of his christened name. One wonders how the concerned authorities could have so light-heartedly allowed this distortion in the name board and further dared to plant it on the thoroughfare as a public notice.

W. P. KRISHNA

INDIAN EXPRESS
Monday, December 26, 1983

Note of problem

A few days ago, I drew from a bank a bundle of two-rupee notes, which were brand new. On reaching home, I discovered to my dismay that one note contained a gap of empty space in a portion of the note indicating a printing error.

If I take this note to market, I am likely to expose myself to the danger of possessing a counterfeit note because nobody will believe me if I tell them that I got it from a bank.

Such negligent acts will expose our currency to the danger of it losing credibility. The public confidence will be shaken by such lapses. RBI, please note!

W P KRISHNA

INDIAN EXPRESS
Thursday, January 5, 1984

Honorarium

Sir, - A few days ago the State Government enhanced the monthly pension of all its pension-holders by Rs.20. This is doubtless a most responsive and compassionate gesture. But this is not applicable to those who receive monthly honorarium although for all practical purposes this payment also amounts to a pension for life termed by the nomenclature 'honorarium'.

The reasons which prompted the Govt. to enhance the monthly pension to its pension-holders are equally applicable to the case of honorarium recipients. The difference between these two categories wears thin and merits the honorarium holders also deserving enhancement of their honorarium on unassailable grounds.

I therefore request the Government to extend its generosity to honorarium-holders also. After all the number of honorarium-recipients in the State may not exceed one thousand. The enhancement if given to this group will be a negligible economic burden to the Government.

W P KRISHNA

INDIAN EXPRESS
Monday, February 13, 1984

Sweet surprise

It is incredible, but nevertheless true. The picture is of 'musambi' (sweet-lime) which, when I peeled and split into two halves, revealed an astonishing spectacle of another small musambi imbedded in it.

This unique phenomenon is liable to be dismissed as a freak of Nature. But on the calm reflection one is bound to see the spark of divinity in it. Man can make nuclear weapons and reach the moon, but he still cannot manufacture a fruit like this. Or even a blade of grass for that matter.

W P KRISHNA

INDIAN EXPRESS
Friday, June 10, 1983

Transport licence

Sir, - It takes a lot of time to get a new driving licence when the original is lost. Hence I suggest that the transport authorities should at the time of issuing licence also issue duplicate of it.

W P KRISHNA

The City Tab
SUNDAY, July 29, 1984

TAB MAIL

Prizewinning Letter

Unions a must

This has reference to your recent article on Vijaya College Students' Union. This note is in response to your call for views on the question of having students' unions in colleges or not.

Democratically organized student forces can be the most effective tool for constructive student activities. To do away with students unions on the plea of indulgence by a certain section of students, is meaningless. Authorities must focus their attention, more on checking the causes of violence than to think of banning students' unions. Suppression, in my opinion, is no answer.

In support of my argument I quote the following verdict in the case of Ananda Vardhan Chandel Vs. Delhi University, AIR 1978 Delhi 308.

"If educational democracy or democracy in education is an integral part of all-round education, then participation in the activities of the students' union including contesting

election to its office-bearers is as much the right of a student as admission to a university or college. Participation in the students' union established and run by the university which is "state" under Article 12 of the Constitution appears to be a fundamental right for the following reasons: firstly, it involves the right to assemble peacefully within the meaning of Article 19(1)(b). Without an assembly there can be no social education or preparation of a student to be a useful member of society and a participator in the democratic process. The democracy in education leads to democracy in government. Students receiving education first participate in the former and after emerging from the universities become participator in the latter. Secondly, it involves the right to form associations or unions within the meaning of sub-clause (c) of Article 19(1) of the Constitution of India. It needs no argument that students' union come into existence unless the students are allowed to form an association or a union".

W P Krishna
Ex-Vice-President
Students' Union, Bangalore Institute of Technology

DECCAN HERALD
Saturday, March 9, 1985

A renewal of faith in Mr. Hegde's Govt.

Sir, - The verdict of the people of Karnataka is a clear expression of their faith in Mr. Good than in Mr. Clean. The people are confident that Mr. Ramakrishna Hegde is 'good' as well as 'clean'. Mr. Rajiv Gandhi, I hope, will stop characterising Mr. Hegde and his party as 'irrelevant'.

The Karnataka lesson should help Mr. Rajiv Gandhi to make responsible public utterances.

W. P. Krishna

INDIAN EXPRESS
Friday, March 15, 1985

Opposition's duty

Sir, - The duty of the party in the Opposition is not merely to oppose every act of the Government for opposition's sake, but to ensure good governance by pointing out deficiencies and supporting acts and policies that will benefit the people. But, unfortunately, in our country the Opposition party, whether the Congress-I or the Janata, has always opted for confrontation.

Will the Congress-I in Karnataka make history by supporting policies of the Janata Government that will help the people? And will the Janata Party which is in the Opposition in Parliament, also do like-wise?

W. P. Krishna

The City Tab
March 24-30, 1985

Tasks for Hegde

I am greatly heartened by the comeback of Janata government in Karnataka. However many tasks lie before them.

Any keen student will be interested in getting a qualitative improvement of examination system. For instance, scope for copying in examination hall by students and opportunity available for substituting or altering marks cards in the offices of the universities have to be removed. Mere presence of police in examination hall and taking disciplinary action against erring authorities cannot be a solution to this problem. Already people have come to feel the lowering of standards in engineering and medical education imparted in the state.

The new government which has come into power, I am sure, is fit to deal with this problem.

W. P. Krishna
Rajamahal Vilas Extension

DECCAN HERALD
Tuesday, April 23, 1985

Varsity reforms

Sir, - This has reference to your editorial 'varsity reforms' (D.H. – April 18). As very rightly suggested by you that the role of the State Government in matters concerning the universities should limit itself to financial aid. I am perplexed at the Education Minister's reformist attitude with a whip in his arms. The Minister should in all fitness implement the Raj Committee report based on the principle of 'absolute autonomy' to the universities. The clause containing 'extraordinary circumstances' under which the Minister seems to take shelter, practically defeats all grand intentions of the report.

I would like to remind him that institutions like the Indian Institute of Science (IISc.), Bangalore, earned brilliant character of reputation and excellence through strong and unassailable foundations of 'absolute autonomy'. The State Government, therefore, should consider educational institutions nothing short of the institution of judiciary and endeavour to devolve itself from all academic and affiliatory interference.

W. P. Krishna

INDIAN EXPRESS
Wednesday, April 24, 1985

Dear fashion

Sir, - It has become a fashion for all politicians in India to swear by cooperative movement and to suggest to the public that the key to the problem of high prices lay in the effective use of cooperatives by the people.

As a result, the State Governments have broad-based the movement by establishing massive organizations like Janata Bazaars to make available to the public items at minimum cost. How far have they helped to check price-line, what they have done is to charge the prevailing market prices.

Each Janata Bazaar is incurring huge overhead charges, thanks to heavy bureaucratisation. Unless these Bazaars are managed by selfless groups of people dedicated to achieve the purpose of holding the price-line, the Janata Bazaars cannot be deemed to be the Bazaars for the people.

W. P. Krishna

INDIAN EXPRESS
Wednesday, July 13, 1985

Terrorism

Sir, – It is surprising that until now the Akalis have not passed a single resolution disapproving violence and terrorism by Sikhs. The only shock treatment that can perhaps be given to vested interests among Sikhs is for President Zail Singh to step down from his high office by declaring that he was doing so to bring erring Sikhs back to their senses.

W. P. Krishna
25, Gangadhara Chetty Road
Bangalore – 560 042

The City Tab
July 7-13, 1985

Hooray elections!

Mr. Santosh Kumar Hans, in his prize winning letter (Tab Mail June 30-Jul 6), has pleaded for the ban of ragging and elections in colleges. While his logic for the ban of ragging is agreeable, his contention that students' unions are a nuisance to discipline is intriguing. I do not understand his statement: 'elections have nothing to do with students' education'.

Elections are a part of the democratic process. If the students must turn out to be useful citizens and good participants in a meaningful democracy, then their participation in elections and activities of students' unions become a necessity.

Every arrangement has its own advantages and disadvantages. It would be better for the government to curb violence and political interference in elections by invoking the recently passed *Goonda Act*. To simply do away with unions and elections, does not mean discipline on the campus.

I pity people like Mr. Hans who seem to advocate theories like 'cut-the-hand-of-if-the-finger-bleeds'.

W. P. Krishna
Rajamahal Vilas

DECCAN HERALD
Wednesday, July 24, 1985

New engg. courses

Sir, - The Bangalore University Academic Council's decision not to accord affiliation to new courses sought to be started by various professional colleges has come as a bolt from the blue. As very rightly pointed out by the Vice-Chancellor courses bearing attractive names may not justify opportunities for employment. It is surprising that the Local Inquiry Committee (LIC) of the university has ignored this vital aspect.

For instance, Industrial Engineering and Production Technology were introduced as branches of engineering in the undergraduate courses which were nothing but offshoots of Mechanical Engineering. While such 'new courses' have only provided opportunities to teachers with qualifications of specialization in those subjects to head such departments, the career aspects of these students still remain in the dark.

Therefore, the Vice-Chancellor's observation in this regard is timely and deserves rethinking.

As a matter of fact, each subject in engineering could be branched off as a separate field of study. It would be better if undergraduate courses have only general branches like Mechanical, Civil, Electrical and Electronics and specialisation of subjects is postgraduate and research programmes. Let us hope the Academic Council stands firm on its decision.

W. P. Krishna
Bangalore

LETTERS

The City Tab
August 4-10, 1985

National Anthem

Movie houses in India stopped playing the national anthem at the end of each show because of the disregard and disrespect it earned inadvertently or otherwise. Many people did not even care to stand up in respect for a few moments when it was being played.

While I agree that many Indians do not know the national anthem fully, it is not justifiable to resort to the earlier practice which proved a failure. Instead it would be better if it is sung at the start of the day at assemblies in all factories and public offices including schools and colleges. Also, all public functions should customarily conclude with the national anthem.

Above all it is virtually important to instil in the people deep love and respect for our national anthem. All attempts at popularising it should come only after this.

W. P. Krishna
Rajamahal Vilas Extension

DECCAN HERALD
Monday, August 12, 1985

Open University

Sir, - The proposed Indira Gandhi National Open University augurs well and will be a milestone in the history of our educational system. The objectives as spelt out by the Minister are indeed laudable, but how far they would be of practical value needs to be seen.

In this context one looks forward for the imparting of training to generate self-employment especially among our rural youth. If this is effectively taken up by the open university, our formal universities with their existing infrastructural facilities can certainly concentrate on research and development.

W. P. Krishna

INDIAN EXPRESS
Thursday, August 22, 1985

Curbing capitation

Sir, - It is a shame that the Janata Government has failed miserably to plug the legal and constitutional loopholes that would arise out of the Karnataka Educational Institutions (Prohibition of Capitation Fees Act, 1984). It is due to the lack of foresight in the leadership of our State that the students who worked hard for the entrance examination to engineering colleges have to face a very bleak and uncertain future.

Small rackets by small people are curbed by the Government. Hence the recent drive against unemployed graduates operating matador vans, eviction of hapless slum-dwellers, harassment to revenue site owners and such other activities which involve the poor and helpless public. If a racket like the one in which education is sponsored by business houses, religious heads and political forces, the Government is known to play to the gallery without really doing anything concrete.

W. P. Krishna
30/A, Rajamahal Vilas
Bangalore – 560 080

Letters

INDIAN EXPRESS
Monday, September 9, 1985

Disgusting 'Basanti'

Sir, - An episode of the television serial 'Basanti' telecast on Friday last was disgusting. I wonder how such cheap performances like a girl smoking beedi are allowed to be screened. The Doordarshan must keep in mind the value system that goes to mould the minds of its viewers, particularly in rural areas.

Less said the better of serials like 'Rajani' that is being screened on Sundays. The serial is out to condemn and project the ill-founded image of Swamijis. Condemning Hinduism does not mean secularism.

A powerful and effective medium like the television should be subjected to strict censor guidelines not only to curb vulgarity but also to combat anti-religious and anti-secular forces.

W. P. Krishna
30/A, 8 'A', Main Road
Rajamahal Vilas Extension
Bangalore

DECCAN HERALD
Thursday, October 10, 1985

Utter negligence

Sir, - This has reference to your touching editorial 'Under tons of soil' (D.H. Sept. 30). The recent tragedy which left three dead at a building site in Palace Guttahally in Bangalore, is yet another pointer of utter negligence of the builder.

The Gangaram tragedy, instead of becoming a reminder of the dangers of negligent construction procedures, has turned out to be another story in black and white. All inquiries and reports seem to be of no consequence either to the accused or the aggrieved, let alone the public. What happened to the much talked about building bye-laws dished out by the City Corporation?

The Guttahally tragedy should serve as an eye-opener. It is high time that the corporation engineers should work out safety measures in construction and insist on them strictly. In this context, I suggest that the plan sanctioning authorities, should in future, insist upon testing of soil by a competent authority before approving any plan for construction.

Hats off to your opening sentence rightly begun with the quote "Sons of soil under tons of soil'. Sadly it speaks too of the declining value of human life in our country, especially of the poor and downtrodden.

W. P. Krishna
Bangalore.

DECCAN HERALD
Thursday, October 24, 1985

Inspiring performance

Sir, - The Prime Minister's participation in the luncheon press conference at the Press Club of India in New Delhi on October 11 is sure to inspire the working journalists in the country for all times to come. The spontaneity and ease with which the Prime Minister went on answering the barrage of questions flung at him one after the other without losing patience or showing any visible signs of fatigue, is a unique conduct of a person in the highest authority which is bound to be a lesson for leaders to come.

It was very interesting and absorbing for anyone to watch on the television the whole conference. The sparkling wit and satirical remarks of the Prime Minister were particularly impressive. While the television coverage was quite realistic in mirroring the entire conference to the public view, the printed version of the whole picture was however not quite realistic. For instance, the report published in your paper entitled 'Pak's N-Plan threat to peace PM' contains a sentence which says that the first life membership of the Press Club went to Pandit

Jawaharlal Nehru. As a matter of fact this is clearly incorrect. In the programme televised anyone who saw would know that Pandit Govind Vallabh Pant was stated to be the first life member of the Press Club.

The printed word is said to be a plighted word and therefore newspapers have to be very careful not to damage this magic of the word by publishing questionable facts.

W. P. Krishna
Bangalore.

DECCAN HERALD
Tuesday, November 5, 1985

Honouring Cariappa

Sir, - This refers to Mr. P. Rajaratnam's letter entitled 'Honour the General' (D.H. – Oct.15). Gen. Cariappa is doubtless a great stalwart who in his career rendered remarkable service in the army and also made special contribution by social services which equated patriotism with the defence of the country. He always used to inspire the youths to put the interests of the country above everything else whenever there were occasions requiring them to play their roles as citizens in their conduct in public. The nation can never forget, for instance, the remarkable work done by Gen. Cariappa as the Chief of the Indian Army to wipe out the spectre of drinking water famine in Chittoor District in Andhra Pradesh during 1952-53 when the entire region was stocked by famine.

The best way we can pay our debt of gratitude to Gen. Cariappa is to name an unnamed prominent road in Bangalore after him to commemorate his memory forever. This remembrance will be a valid factor for all times to come and will be a source of inspiration to the rising generation from time to time.

Now, Mr. Rajaratnam has also suggested to renaming of certain streets which were named after certain Englishmen and wanted them to be substituted by names of current Indian and world leaders. This will become a questionable act on the part of the Indian people who cherish high ideas and traditional values of life such as regard for truth, sincerity of purpose and displaying undying gratitude for all good deeds done for their betterment. The Englishmen who had been honoured then by naming the roads in Bangalore had really earned their glory and greatness by sheer dint of merit which came to be acknowledged by the people of those days. If we begin to treat these relics of history in the spirit of light-heartedness a premium will be set on hypocrisy in the behaviour of the people in a gradual way.

How can we forget Lord Irwin, the then Viceroy, for example, who had recognised the worth of the national awakening brought about by Mahatma Gandhi on the one side and the ethical base provided by the Mahatma to the Salt Satyagraha Movement on the other? The great pact hailed as 'Gandhi-Irwin Pact' even to this day is a glorious chapter of India's independence had actually led to the holding of two round-table conferences in London. In this context it becomes abundantly clear that greatest harm has been done to the sense of our traditional values by renaming the Irwin Circle

on the K. R. Road in Bangalore as Prof. Shiv Shankar Circle. By this I do not mean that names of Indian leaders should never be honoured by naming roads after their names. There are many important roads and streets which are unnamed that can be named after them.

In this light the suggestion of Mr.Rajaratnam to rename Kensington Road after Gen. Cariappa comes with ill-grace which, I am sure, even the General himself may not take in good taste.

W. P. Krishna
Bangalore.

DECCAN HERALD
December 2, 1985

National integration

Sir, - The first death anniversary of our former Prime Minister, Mrs. Indira Gandhi fell on October 31 last. The Rajyotsava day in Karnataka also occurred the next day, namely November 1. Every year this coincidence of dates will be repeated.

Everybody knows the values for which Mrs. Gandhi stood and died. National integration was very dear to her. She abhorred regionalism, linguism and parochialism of any kind. All these qualities were highlighted as her virtue and as a dire need of India for all times to come by our national leaders of every type and stature. In Karnataka itself, Ministers and all other political leaders celebrating her death anniversary reiterated the importance of these values as strongly as possible.

The very next day on November 1, came the anti-climax as it were. The same leaders speaking to the public from various platforms hardly 24 hours later celebrated the Rajyotsava – the birth of a new State wholly on linguistic basis – and stressed the importance of linguistic

propensities among the people and the indispensability of the Kannada language as a basis for administration in the State. As for national integration, less said the better because none of them were seen to be in a mood to extoll national integration of India. In politics, expediency always seem to decide the temperament and attitudes of public leaders.

In the interest of Kannada and the linguistic State of Karnataka itself, it will be a very wise and noble gesture on the part of the Government if it merges both Mrs. Gandhi's death anniversary and the Rajyotsava and make the topic of national integration the spearhead of this single celebration wherein the role of regional language and of linguism in their limited scope of help to the administration for the convenience of the people may also be emphasised.

W. P. Krishna
Bangalore.

DECCAN HERALD
Friday, January 3, 1986

KPSC appointments

Sir, - I have gone through very carefully your comments in your editorial entitled 'KPSC appointments' (D.H. – Dec. 18) on the appointment of Mr. B. L. Gowda as the Chairman of the Karnataka Public Service Commission. I have also read the reader's reactions published in these columns on the same subject (Dec. 25).

Offices like the Chief Justice, the Lok Ayukta, the Vigilance Commissioner, Judicial officers, topmost dignitaries in educational spheres, and the Chairman of the Public Service Commission, to name a few only, are generally acknowledged by the public as posts to be occupied by men of integrity and the popular faith in them is generally taken for granted. This, at any rate, has been the unbroken tradition in our country from time immemorial. People generally have strong belief in the ability of the Government to put the right person in these positions of high esteem in public life. So far no section of the public has ever assailed the correctness of such choices made by Governments.

It is most unfortunate that the appointment of Mr. Gowda as the Chairman of KPSC has

come to be assailed by your editorial as well as other critics supporting your views. Ostensibly speaking there is plainly nothing to be said against the entitlement of Mr. Gowda to this high office. Such an appointment is made public only after prolonged weighty probe and consideration of all aspects hearing on the subject by both the State and the Central Governments. In this context and in the light of the well-known established principles and popular beliefs in the traditional practices of the Governments there is no public interest as such necessitating the questioning of the appointment of such a person as Chairman of PSC.

One can understand any comment on the choosing of a person for such high offices if it was made while the choice itself was under contemplation in the public eye. Once the selection and appointment had been made, a duty is cast on all democrats to repose implicit faith on the calibre of such a person to the post and to accept him without questions. If one goes on questioning such appointments the public morale and faith in the democratic functioning of the Government itself will become jeopardised.

Another point. The accountability of Mr. Gowda to the Public in his functioning as the Chairman of KPSC actually begins only from the time of his assumption of office. Hence, a duty is cast on all to strengthen his hands in the efficient discharge of his duties.

W. P. Krishna
Bangalore.

DECCAN HERALD
Wednesday, February 12, 1986

Arrack bottling case verdict and after

Sir, - The verdict of the Karnataka High Court in the arrack bottling case has justly upheld the right of the citizen to submit any action of the Government to judicial scrutiny.

The verdict by itself has been a milestone in the history of public interest litigation.

The issue involves the question of purity in public life and public funds. Whether or not the Hegde Government is possessed of mala fide intentions the issue as such necessitates examination by a competent authority like the Lok Ayukta, whose purview includes the office of the Chief Minister. Not to subject himself to such a test would only mean unbecoming of Mr. Hegde with his reputation as 'Mr.Clean'.

W. P. Krishna
Bangalore

DECCAN HERALD
November 1, 1986

Statue stir parochial, misguided

Sir, - The news about the statue of Sir James Gorden, the last Chief Commissioner of Mysore, (D.H. – August 20) is very disturbing. It is unfortunate that a section of youth in Mysore is agitating for the removal of the statue of Gorden installed in front of the District Offices there.

Statues and monuments are meant to pay public homage to the memories of great men for their past services. The reported agitation is clearly an undemocratic, parochial and misguided action that will only create ill-will against the British residents in India and also an embarrassment to Indians living in Britain who for aught we know would surely have built up love and goodwill towards the British people. Also, this will become a questionable act from the Indian people who cherish high ideals such as regard for truth and gratitude for good deeds for their betterment. The Englishmen who had been honoured by installing their statues had really earned their greatness by merit which came to be acknowledged by the people of those days. If we begin to treat these relics of history lightly we will put a premium on hypocrisy.

It is shocking that our Home Minister should have given an assurance that the statue will be removed to the museum.

The tomb of Raja Rammohun Roy the father of Modern India, is now kept protected as a monument in Bristol by the British authorities and the Mayor of Bristol, it is said, officially pays homage to the memory of the Raja by visiting the tomb every year on his death anniversary. We must reciprocate this fine gesture of the British and should realise what a blow it will be to our national honour and self-respect if this tomb of the Raja be removed or allowed to decay.

One earnestly hopes that the misguided youth will call off this agitation immediately.

W. P. Krishna
Bangalore

DECCAN HERALD
Monday, September 29, 1986

A minority

Sir, - There has been a hue and cry over the findings of the Second Backward Classes Commission headed by Mr. T. V. Venkataswamy. Few would understand that the findings will affect only 2 per cent of our State population who seek Government employment or consequent benefits like promotions. Few would also understand that this microscopic minority is not merely after Government service but greatly after 'extra income' (a sober explanation for bribe).

Unfortunately this minority is backed by a vicious circle of self-seeking politicians and vested interests who whip up sentiments of caste and religion among the great majority of the unaffected and gullible rural population. It is high time that the Government should put down these vested interests without any reservations whatsoever before tackling the issue of reservations as such in all its bearings.

W. P. Krishna
Bangalore

DECCAN HERALD
Wednesday, January 7, 1987

New experiment in democracy

Sir, - This has reference to Mr. J. M. Lobo Prabhu's letter captioned 'Consequences of Parishads and Mandals' (D.H. – Jan 2).

Chief Minister Ramakrishna Hegde is doubtless a pioneer in seeing to the decentralisation of democratic process among the people. The object is to make the liberties of the people at lower levels and their enjoyments of services of the State more convenient and comfortable on the one side and less cumbersome and quicker on the other. We are yet to taste the working of decentralising set into motion at district and mandal levels.

Critics like Mr. Prabhu have been fearing about the creeping over of too much of officialdom in this process. Perhaps officers are there to guide the people not to misuse their powers and at the same time become responsive and responsible to their voters. The bureaucratic set up should progressively disappear and eventually vanish yielding place to a complete full-fledged democracy and self-autonomy for the local villagers. It is too early to

predict the exact results of this new experiment in democracy. Anyway, it is good and heartening to note the bold way in which the Chief Minister has acted in taking the first sure step towards decentralisation of authority.

Mr. Prabhu's fears about grouping a population of 8000 into a Parishad without historical and natural background being taken into reckoning may after all prove groundless because we have to take the groups at some level and while doing so at grass-root levels the present arrangement alone holds good. The same thing can also be applied in the case of district bodies like the Zilla Parishad. In the case of bigger bodies like the Vidhana Sabha and the Lok Sabha, the criteria of geography and local physical features will certainly have to be applied in a more pronounced way.

Against what is pointed out by Mr. Prabhu, the official machinery of decentralised bodies need not necessarily be too overwhelming. It can be set up according to the size of the local bodies.

In regard to duplication of work feared by Mr. Prabhu, under the decentralised set up the very functioning of these bodies is meant to avoid duplication especially in matters of development of minor irrigation sources, electricity, schools, etcetera including repairs of tanks, bridges, roads and the like.

Mr. Prabhu's contention that election to these bodies will be on communal basis does not hold enough water. Only the able people will be voted by the people to whatever community they may belong. One need not bother at all about the communal complexion of these bodies because of the intrinsic efficiency of merit because of which alone the people will vote to power their leaders in these bodies.

When full powers of autonomy and decision-making including implementation of the various developmental programmes are enjoyed by these elected members there is no fear of alignments and other artificial barriers coming in the way as feared by Mr. Prabhu.

W. P. Krishna
Bangalore

DECCAN HERALD
January 17, 1987

Small Tanks

Sir, - There are small lakes, ponds, tanks, dilapidated wells, river-beds and spring channels in Karnataka which are vital sources of irrigation. Most of them are rain-fed. Each can easily irrigate about two hectares of land, depending on the size of the tank. In this way they play a key role in the regeneration of the village economy. But unfortunately most of them are not as useful to the villagers as they could be, as they get silted up almost every year with the onset of rains. Nothing has been done to sieve the silt from the water in the storm –water channels to these sources of irrigation. The hierarchy of governmental engineers is concerned only with major tanks having large achkats. These smaller sources of irrigation go by default in regular maintenance.

Silt clearance is a costly affair, the government says, and the magnitude of the job is too great to involve governmental expenditure. As one experienced in the numerous problems harassing the villages, I can say that silt clearance has baffled the villages for quit a long time. In the decentralized

set-up of Zilla Parishat and mandal panchayats, slit clearance woke should be given top priority for execution. If money is not available, "shramdan" parties or land armies should be organised and put on this job as frequently as possible.

Every small group of villages should have a standby manpower force to go into action immediately when called. Even outbreakes of fire and flood relief operations can be entrusted to them. Will the decentralised administraton look into this?

W. P. Krishna
Bangalore

The HINDU
Thursday, November 9, 1989

Communal Virus

Sir, - The communal virus has again started to rear its ugly head if the recent Bihar clashes are any indication. It is not by one's own choice that an individual happens to be born in any particular community. Government patronage through education, legislature membership and other social regeneration programmes is a legacy handed down by the British administration. For centuries India had been ruled by Hindu and Muslim rulers, but the country never had the mechanism of favoured treatment such as reservation of facilities for such of those communities declared by the Government to be in need of special privileges and favours. It is only after the advent of the British that this bogey of communalism and communal interest was raised.

Broadly speaking, the Constitution of India is basically secular in concept and democratic in its functions. There can be no place for communal interest as such. This is a curse on the people of India for which the Britishers are solely responsible. After winning Swaraj we should have adopted a uniform civil code for all

sections of our people. This has not happened. Mahatma Gandhi doubtless worked for Harijan uplift because they were treated as downtrodden people by the traditional Hindu society and what Mahatma Gandhi objected to was the system of untouchability in all its forms. By continuous support of this policy of campaign against untouchability the Harijan social issue acquired a political dimension. Strictly speaking, there is no communal problem as such between Hindus and Muslims except the artificial differences created by the system of administration. In the spiritual sphere both these communities are fanatically god-minded and have great respect for spiritual values of life.

Now that the general elections are round the corner, politicians should resolve to steer clear of communal issues whatsoever.

W. P. Krishna
Bangalore

INDIAN EXPRESS
Wednesday, January 17, 1990

DD Bill needs more teeth

Sir, - Many have begun to think aloud on the proposed Prasar Bharati Bill envisaging autonomy to Radio and TV media. The proposed Bill has emerged out of popular resentment against the feeling that 'They tell the people what the Government wants to tell them'.

I would like to add my humble word to the score of comments which the proposed Bill will call out.

The Bill should spell out in clear terms the concept of autonomy it seeks to employ by defining its political, financial and administrative dimensions.

This much is now clear. The Prasar Bharati Bill cannot afford to surrender its permanent interests to the convenience of the ephemeral power of the party in power. If the Prasar Bharati has to perform its duties with utmost public advantage, it has to be free of political and financial control from outside. I feel that a healthy system of generating financial resources from within the systems should be worked out. A representative high-powered

governing body should be constituted to include the Prime Minister, the Chief Justice of India, the Leader of the Opposition in the Lok Sabha and the Chairman of the Press Council of India.

While autonomy should be coupled with public accountability in terms of fair play and good taste, care should be taken against popular tactics like non-interference and detachment practised by Governments in autonomous institutions like universities.

Presenting balanced views, providing accurate information, providing entertainment in terms of culture, promoting conciliation rather than confrontation – these should be the sum and substance of the proposed Bill.

The Government should not hesitate, in spite of its eagerness and enthusiasm to totally liberalise the electronic media, to provide for exercising full and absolute control over the Prasar Bharati in times of grave national emergency like war, armed rebellion and threat to unity and integrity of the nation. For in the words of Anon, 'Freedom is not the right to do as you please, but the liberty to do as you ought'. And if I may modify Anon's words, 'Autonomy is not the right to do as you please, but the liberty to do as you ought.

W. P. Krishna
30/A, Rajamahal Vilas
Bangalore – 80

DECCAN HERALD
Monday, May 6, 1991

Vocational course scheme needs to be outlined

Sir, - This is with reference to vocational courses to be linked to engg colleges (DH, April 28).

The Dr. S. Ramegowda Committee, which has submitted its interim report to the State Government, deserves to be congratulated on its earnest attempt to meaningfully link engineering colleges with industries.

The committee has rightly assessed that the present job-oriented pre-university diploma courses did not meet the expectations with which they were started. It has suggested that the courses be remodelled by shifting the vocational section from pre-university colleges to engineering colleges, polytechnics and industrial training institutes. The proposal is no doubt laudable.

But can such restricting prove better? Has the committee assessed the capability of technical institutions to take up vocational courses? The fact that most of the engineering colleges in the state are not in a happy position in regard to staff and equipment indicate that the proposal is sure to get frustrated.

The apprehension is, the remodelling of the course may prove to be no more than old wine in a new bottle. The committee instead of generalising that all technical institutions are not being used to maximum capacity should identify institutions which are capable of handling vocational courses, in addition to their existing course, both in terms of quality and quantity. The scheme of vocationalization must be spelt out in clear and unambiguous terms.

As most of the technical institutions are privately managed, with donations and capitation fees, the moot point is: Will they be willing to start vocational courses, despite poor monetary returns? The committee's idea of legislation to bring about vocationalization in technical institutions needs re-thinking.

The half-hearted manner in which public and private sectors have been implementing the Apprenticeship Training Schemes governed by the Apprenticeship Act, reflects the efficacy of legislation in such matters. The curriculum for various vocational courses should be left to the discretion of the institution and the participating industry. Autonomy to this extent should pave the way for qualitative competition, which is sorely lacking in the present stereotyped system of vocational education.

The thrust of the committee's final recommendations should essentially be towards change – in curriculum, in teaching techniques and in the course itself.

W. P. Krishna

DECCAN HERALD
25th February 1992

School admission

Sir, - This is with reference to the news item Probe urged into school donations (DH, Feb.16).

Legislator Ramalinga Reddy deserves to be congratulated on voicing his concern at a very crucial time.

The fact that managements of many private educational institutions are collecting huge sums of money as 'donations' has, indeed, reduced imparting of education to 'business' as Mr.Reddy puts it. His suggestion that the government itself should print admission forms and distribute them to the parents prescribing the admission fee, is refreshingly welcome. The government should see that no student is denied admission; since education, particularly universalisation of primary education, is the sole responsibility of the state.

It is good that private educational enthusiasts have come to the rescue of the state by starting innumerable schools for nursery and primary classes. Many parents are already in the queue before nursery schools seeking admission for their children. But the

managements of many of these schools have already notified closure of admissions for the forthcoming academic year on the ground that children have been already accommodated on a merit basis. Apart from the question how the merits of the little ones are judged on a just basis, the most disquieting result is that they cannot get admitted to schools in their locality. The state government should therefore direct all aided and unaided schools to give preference in admissions to children who belong to the locality where the school is situated.

W. P. Krishna

DECCAN HERALD
June 29, 1992

Green belt: efforts to preserve it frustrated

Sir, - BDA has, in a notification invited objections, if any, by any person or persons affected by the proposal of change in land use from green belt to public and semi-public use in respect of 20 acres of land belonging to the State Government in Survey Number 82 of Jakkur Village, Bangalore North Taluk.

The notification is a glaring example of how the efforts of town planners to preserve the green belt around the urbanizable limits of the City are being frustrated.

What the deplorable is the fact that the State has sought the change in land use from green belt to public and semi-public use through its own instrumentality – the BDA – under the pretext of resorting to legal means to legalise its otherwise illegal act of encroaching the green belt.

The State Government would do well to drop the proposal and restrict land uses in green belt to large-scale tree planting, location of recreational facilities, gardens, nurseries and dairy and poultry farms.

It is high time that the green belt got its due importance and serious attention by all concerned. The need of the hour is a clear-cut statement of the objectives of the green belt provided for in the land use zoning regulations and related enactments and adoption of the policy of negative compulsion and positive encouragement to control the growth of Bangalore.

W. P. Krishna
Bangalore

DECCAN HERALD
August 20, 1993

Land use

Sir, - the BDA has published a notice in your esteemed columns (DH, Aug 5) proposing a change in the land use of its own land in Gangenahalli, earmarked for residential use in the comprehensive development plan (CDP) of Bangalore, to commercial use.

A careful reading of the notice reveals that the BDA is trying to legalise its otherwise illegal act of perpetrating the unauthorised change in land use by having already auctioned the land in question earmarked for residential use in the CDP as shop sites in gross violation of land use and zoning regulations under the Karnataka Town and Country Planning (KTCP) ACT, 1961.

The KTCP act has prescribed an elaborate procedure for permitting change in land use which is meant to be regularatory and not remedial. Instead of seeking a remedy for its wrong the BDA would do well to withdraw the proposal in public interest for such a proposal, if pursued, is likely to shake the confidence of the people in the credibility of the BDA as a statutory enforcing agency under the KTCP act.

W P Krishna
Bangalore

DECCAN HERALD
Wednesday, November 1, 1995

Trust & society

Sir, This has reference to Mr. U. S. Venkataraman's letter entitled Trusts' registration (DH 12.10.95)

Mr. Venkataraman is right when he says that in Karnataka several public trusts are registered under the Indian Trust Act which is mainly applicable to private trusts. Few would know that it is the Charitable and Religious Trusts Act (Act XIV of 1920) which controls the administration of public trusts.

Although the court administers a public trust in theory under Section 92 of the Code of Civil Procedure, nevertheless some of the principles of the Indian Trusts Act also apply to public trusts. The principles embodied in Sections 44, 52, 62, 63 and 76 of the Indian Trusts Act are applicable to all kinds of trusts.

In order that Act XIV of 1920 may apply, the trust must be substantially for public purpose. Act XIV of 1920 is intended to provide more effective control over the administration of charitable and religious trusts and provision is made therein for obtaining an order calling on

the trustees to give particulars of the object of the trust and if the trust is denied, to file a suit.

Mr. Venkataraman is right when he says that the constitutional and organisational needs of public trusts are different from private trusts. Indeed there are quite a few public trusts which are run on the lines of a society whose trustees are elected periodically by 'members of the trust' and whose ultimate control is sought to be vested in the so-called 'general body of members of the trust'. Very few probably realise that a trust is nothing but the confidence reposed by the founder in a certain person called as trustee who holds and administers trust property for the benefit of beneficiary and is therefore not a legal entity or a legal person analogous to a society, co-operative society or a company. And for this reason 'membership' of a trust is a contradiction in terms.

W. P. Krishna
Bangalore

DECCAN HERALD
Thursday, March 6, 1997

Fixing market value on a flat rate basis arbitrary

Sir, This refers to the two notifications issued recently by the State Government declaring the estimated market value of immovable properties in and around Bangalore under Sections 45-B(3) of Karnataka Stamp Act, 1957, for the guidance of the registering officers.

The yardstick used to arrive at the so-called 'market value' as enumerated in the said notifications appeared to be unilateral, unrealistic, arbitrary and violative of all established principles of valuation. When property value can greatly differ from road to road, belt to belt, location to location, etc., within the same area, there appears to be no rationale behind fixing the so-called 'market value' on a flat rate basis. For instance in Kumara Park extension, the 'market value' of residential property is estimated at Rs.2000 per sq ft and that of commercial property at Rs.3000 per sq ft. One or two shops or commercial establishments are found scattered amidst residential properties in Kumara Park extension and one cannot reasonably comprehend how

property value can differ as much as 50 per cent between two adjoining properties in the same area.

The State's prerogative to collect revenue by way of Stamp Duty should at any rate be based on fair market value marked by judicious consideration and not at the cost of impairment of justice, equity and good conscience. It would be appropriate, therefore, that the fair market value should be determined by a quasi-judicial authority of a rank of not less than the deputy commissioner, after appreciating evidence adduced before him by the transferees and the State.

The transferees should be afforded every opportunity to place their views on various factors touching fair market value peculiar to the facts and circumstances of each case either through an advocate or an approved valuer or both.

I hope that good sense will prevail on the State Government by withdrawing the said two notifications forthwith in larger public interest.

W P KRISHNA
Bangalore

THE TIMES OF INDIA, BANGALORE
THURSDAY, JUNE 7, 2001

Good Move on College Admission

With reference to 'Stick to norms or face the stick' (June 5) in which higher education minister G. Parameshwar has warned all aided degree college managements against not following reservation norms in admissions. A proposal for a comprehensive admission policy is indeed welcome.

Colleges receiving 100 per cent salary grant ought to strictly adhere to the reservation policy in its entirety and it would be in the fitness of things if the government withdrew the salary grant if they failed to do so. In 1997, the then regional joint director of collegiate education, Bangalore vide circular No.115/GES/AC/01/97 dated 10.06.1997 had clearly laid down the norms for admissions as per state reservation policy in no uncertain terms.

While some reputed colleges in Bangalore have given the circular a go-by, some have apparently allotted only a few seats to SC/ST candidates and filled up the majority of seats according to their whims and fancies with the tacit approval of the department officials. The

situation is worse in certain colleges where there are both aided and unaided sections and the roster system is followed half-heartedly.

The roster system applies not only to aided colleges but also to unaided colleges. The state government does not in any way distinguish between an aided and an unaided college in this matter. While salary grant can be withdrawn in the case of aided colleges, the government can always withdraw its recognition to unaided colleges.

It is nice to note that the minister has asked the university affiliation committees not to recommend renewal of affiliation if the colleges did not conform to the reservation policy. The unholy nexus between department officials, college managements and politicians in power has been the root cause of all bungling in admission.

W P KRISHNA
Bangalore

DECCAN HERALD
FRIDAY, JUNE 8, 2001

Admissions should be according to norms

Sir, this bears reference to be a news item "Colleges denying seats to average applicants warned" (DH, june 5), in which higher education minister G. Parameshwar has warned all aided degree college managements against not following the reservation norms in administrations. A propoposal for a comprehensive admission policy is welcome.

Colleges receiving 100 per cent salary grant ought to adhere to the reservation policy and it would be in the government withdraw the grant if they failed to do so.

In 1997 the Regional Joint Directors of Collegiate Education, Bangalore, vide circular no. 115/GES/AC/01/97 DT: 10-6-1997 had laid down the norms for admissions as per state reservation policy in no uncertain terms.

Many colleges are violating the circular with impunity. While some of the reputed colleges in Bangalore have given the circular a go by, some have apparently allotted a few seats for SC/ST

for name sake and filled up majority of the seats according to their whims and fancies, of courses, with the tacit approval of the department officials. The situation is worse in certain colleges where there are both aided and unaided sections and the roster system is followed half-heartedly.

It must be remembered that roster system applies not only to aided colleges but also to unaided colleges.

The State government does not in any way distinguish between an aided and an unaided college in so far as the roster system is concerned.

While salary grant could withdraw in the case of aided colleges, the government can always withdraw its recognition to unaided colleges. It is pleasing to note that the minister has asked the university affiliation committees not to recommend renewal of affiliations if the colleges did not conform to the reservation policy.

The unholy nexus between department officials, college managements and politicians in power as been the root cause of all bunglings in admission. One fondly hopes that the minister will ensure that admissions are made strictly in according with the proposed comprehensive admission policy without yielding to favour-seekers.

W P KRISHNA
Bangalore

Letters

W. P. Krishna
Consulting Engineer
Environmental Activist
State Youth Awardee

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23.03.2001

Shri B. Krishna Bhat
6,11th cross, 8th main, 3rd phase
Girinagar, Bangalore – 560 085

Dear Mr. Bhat,

Congratulations! I learn that you have filed a public interest litigation in the matter of preservation of green belt area in which the hon'ble high court of Karnataka has passed an interim order to the effect that no authority shall grant permission to put up any construction in the green belt area.

It appears that the Bangalore development authority is now granting permission in gross violation of change in land use and zoning regulations to establish colleges in green belt area. The land use regulations clearly state that only **"under special circumstances"** permission could be granted to **"school"** in green belt area. This being the legal provision, the B.D.A., it appears, has sought to interpret **"school"** as **"Educational Institution in General"** which is illegal on the face of it. Change in land use is permissible only to **"school"** (where children upto 19 years of age receive instruction) and not **"college"**. This provision is particularly made with a view to protect the interest of the state in its avowed policy of universalization of primary education."**School"** as defined in Ramnath Iyer's law

lexicon is **"an institution of learning of a lower grade than a college or a university".** Therefore, to enlarge the scope of the word **"school"** to mean and include **"college"** would defeat the very purpose of this provision of law and is clearly against public interest.

Trust you will bring this to the notice of the hon'ble high court as otherwise your well-intended PIL to maintain the balance of environment and ecology might be jeopardised.

Thanking you,

Yours in public interest,

W.P. Krishna

P.S.: enclosed are a few press clippings over the years which speak for themselves on my own humble effort to protect the environment at the individual level.

DEVELOPMENTS IN INDIA – PAKISTAN RELATIONS IN RECENT TIMES

Prime Minister Atal Bihari Vajapayee's often repeated statement that we have a right to defend ourselves against "cross- border terrorism" is a matter of concern to all of us. And to be told that "cross- border terrorism" is nothing but a proxy war by Pakistan is quite disturbing. Pakistan General Pervez Musharaff's statement that "cross-border terrorism" referred to by Mr. Vajapayee is nothing but a part of the freedom struggle of the Kashmiris, is equally disturbing.

But what is more disturbing for us is to read Defence Minister George Fernandes's provocative statements like 'we are on the red alert', 'we are ready to face any trying situation', etc. Statements of this kind do not augur well for improving relations between India and Pakistan. Our preparedness to meet any exigency should not in any manner indicate that we are war mongers. As a strong and mature nation, we can always express quiet confidence instead of resorting to war of words.

War does no good either to India or Pakistan. In the name of defending against "cross-border terrorism" we may kill terrorists. But can we, like-wise, kill terrorism? No. it's impossible. Terrorist groups, we are told, have their networks in over 65 countries in the world, thus having global ramifications. Another India-Pak war cannot, per se, end terrorism. It will only exhaust our vital resources.

Buses have stopped plying, trains have been halted, aircrafts are banned to fly between the two countries, and diplomatic channels prompted by respective political expediencies are getting closed. Not withstanding all these, Indo-Pak relations can still improve if it finds its root in the commonality of cultures.

One thing is clear. People of both the countries do not really want a war. The need of the hour therefore, is to create popular public opinion against provocative statements made by leaders on both sides. The mass media and the intelligent therefore have a vital role to play in improving relations between India and Pakistan.

Date: 03.01.2002

W.P.Krishna
Hon. Secretary
Seshadripuram Educational
Institutions, Seshadripuram
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Welcome Address

On behalf of the organizers, I extend a warm welcome to you all for this two-day national symposium on "Automation and Robotics – Applications in Agriculture and Allied Discipline" being jointly organized by the Karnataka State Center of the Institution of Engineers (India) and Sri Venkateshwara College of Engineering, Bangalore

I would like to give a brief introduction to the Institution of Engineers (India) and Karnataka State Center.

The Institution of Engineers (India), established in 1920, is one of the largest professional body of engineers in the whole of Asia. It encompasses 15 engineering disciplines and gives engineers a global platform from which to share professional interest. It has membership strength of nearly 0.7 million. With its headquarters at Kolkata, IEI has served the engineering fraternity for over nine decades. In this period of time it has been inextricably linked with the history of modern-day engineering.

The Karnataka State Center of the institution established at Bangalore in the year, 1934, is one of the most active centres in the country. With a meager membership strength to start with, the Center has brought into its fold a large section of fraternity with a membership strength of over 12,000 cooperate members

and 30000 non-corporate members. Widening its horizon of technical activities, the centre has established seven local centres at Belgaum, Davangere, Dharwad, Gulbarga, Mangalore, Munirabad and Mysore to serve more and more professional groups.

The Robotics technology has taken its shape in all the disciplines of engineering and technology. The applications are from kitchen to sky. The recent trend shows the applications in agriculture which includes production, processing and storage of food products. Since the robotics technology has its wider dimensions and potential in agriculture activities, it may be used in the field as a slave to help the farmer through the use of alternative automation with reduction in the production cost.

However the technology has a wide applications in engineering especially where there exist the '4D's (Dirty, Dull, Difficult and Dangerous jobs). The symposium focuses on the present and future applications of this technology and make it available to the industries for production and reducing the tedious manual labour and cost of the production.

Eminent specialists from various organizations are invited to present papers at this symposium.

I am sure; all of us will have an interactive session for the next two days and enrich our knowledge.

Dr. Wooday P. Krishna
Chairman
The institution of engineers (India)
Karnataka state centre

Message

I am happy to note that the alumni association of Sir K.P. Puttanna Chetty students' home, Bangalore, is bringing out a commemorative souvenir to make the 150th birth anniversary of Sir K.P. Puttanna Chetty.

Sir Puttanna Chetty is one of the earliest builders of modern Bangalore. He laid a firm foundation for a orderly growth of the city as President of Bangalore city municipal council. I recall the long association of my beloved grandfather late Sir W.H. Hanumanthappa with the city improvement committee as its member during 1920s which was presided by none other than Sir Puttanna Chetty himself.

Sir Puttanna Chetty was a great visionary who always thought of the future generation. He built a students home to provide boarding and lodging facilities to rural and poor but merited Veerashaiva students who wished to pursue higher studies. In those days, such facilities were rare and difficult to find. Sir Puttanna Chetty, Sri Gubbi Thotadappa, Sri B.K. Mariyappa, Sri Sampannappa and other distinguished citizens of hallowed memory started a hostel movement which was replicated by other communities not only in Bangalore city but also in district and taluk headquarters across the state. Students who have passed out of the students' home started by him over the years have turned out to be socially productive citizens of the state and the country.

A grateful nation always remembers the outstanding work of public spirited citizens like Sir Puttanna Chetty and Sir M. Visveswarwiah for what mattered to them was not power, position or wealth but the work they did during their life time. May the life and the work of good and great Sir Puttanna Chetty continue to inspire all of us!

Wooday P. Krishna

A Selfless Indian Scientist P.C. RAY

Prafulla Chandra Ray was the first scientist to prove to the world that Indians were in no way inferior to anyone in the field of science. His approach to the problems and perseverance to know the scientific truth particularly in the field of chemistry was a becon light to the scores of scientists India was to produce. His experiments laid the foundations for the future development of chemistry in India. He was rightly called the 'Father of Indian Chemistry'.

The birth of P.C.Ray marked a turn in the history of Indian science. The second half of Nineteenth century brought into India several greatmen who worked for the betterment of the country. P.C.Ray was one of them. His mind was synthesized by the lights of the east and west. He also laid his hands on national aspects like religion, education, society, industry and rural life. His work was thorough, thoughtful and constructive. Ray in his own sphere marshalled the support from the general public throughout India. There was selfish dedication of life and dauntless character in Ray. He was eager to sacrifice time and money for the upliftment of the country. He worked over fifty five years in the service of the

motherland. He was a social reformer, a profoundly religious man, a philanthropist, a man interested in political events of his time, and towering all these he was a great scientist.

P.C. Ray was born on 2nd August, 1861 in Jessore. His father Harish Chandra Ray held a Seristadar-ship at Jessore and was interested in education. He was known for his erudition, oration and social benevolence. Prafulla's education started in a school founded by his father. He was always studious but not a book-worm. Later, Ray joined the Hare School at Calcutta. His father reckoned the boy's intelligence very early. He would say, 'when books would be read by Prafulla, he would not have time to breathe: you can see that my Prafulla would be my wise son'.

Ray had a fine family background. He had an understanding father and mother. Mental discipline and physical discipline went together with him. In 1874 he joined Albert School. He studied both Sanskrit and Latin. After the high school, Ray joined the Metropolitan Institution College for F.A. class. He developed taste for chemistry and also attended the classes at the Presidency College. The study of chemistry marked a turning point in his life. Though not a popular subject then, he had an affinity for it. Ray was a very bright student in the college. He was granted the Gilchrist Scholarship. With this scholarship for support he set sail for England in 1882. He took up the B.Sc. course in Edinburgh University. Here he came across Prof. Crumbrown. The professor influenced him more and Ray realised that chemistry suited him most. His scholarly thesis in Inorganic Chemistry relating to periodic classification brought him his doctorate degree in 1887. The same year he was elected vice-president of the Chemical Society in Edinburgh University. This was a rare honour for the young Indian from Calcutta.

Ray returned home in 1888. India was then under the British. Indians were not given high posts either in administration or in educational fields. Ray could not immediately secure a job. After a year he was appointed as a lecturer in the Presidency College. He worked hard and ultimately demonstrated to the world that his

knowledge of chemistry was of a high order. It opened many avenues of successful work. He became a professor. He was very popular among his students. He was lovingly called as 'Acharya'.

In 1894, his scientific career took an unexpected turn when by an accident he discovered mercurous nitrite. While working with cold dilute nitric acid and mercury, he was struck by the appearance of a yellow crystalline deposit. On analysis he found it to be a new mercurous salt known as mercurous nitrite. This joy knew no bounds. His name and fame spread like a wild fire. In 1902, Ray wrote 'A history of Hindu Chemistry'. This brought him high appreciation in the scientific world.

Ray went to England in 1904 and worked with new vigor in the 'David-Faraday research Laboratory.' Here Ray met Sir William Ramsay, James Walker and Dewar and learnt newer methods of science but roused in them a sense of nationalism.

Ray established a firm, 'The Bengal Chemical and Pharmaceuticals Works Ltd.' He wanted to employ the unemployed Bengali youth and manufacture items that would be economic easily salable. In recognition of his scientific researches and service to society the British Government conferred the title of 'C.I.E" on him in 1912 and in 1919 he was knighted. In 1931, 'Sir Prafulla Chandra Research Laboratory' was founded.

Acharya was not only a scientist but also a humanitarian. Ray looked to the needs and comforts of his employees like a father. In 1921, he took up the relief work in the famine stricken district of Khulna. He had love for his fellow men. This work was so well organised that relief reached the people even in the remotest places. He was elected as the President of the Bengal Relief Committee in 1922. He was not only destined to be a great scientist of India but also a great social worker.

Acharya traveled all over Europe and ex-changed thoughts and ideas on scientific matters with men in the field. He was an unofficial ambassador of science from India. His message was to propagate India's prestige in the domain of science and establish closer contact with other scientists in research and learning. His own work

on the nitrites evoked enthusiasm in many parts of Europe and these won him the title of 'Master of Nitrites'.

Though a believer in God, Ray did not accept demonstrative worship. His selfless work, dedicated life had won him affection and respect from all men and women. He was keen about service to women too. Acharya gave away everything of his for the cause of their education and social upliftment, leaving behind nothing in cash or property. He always spent less on himself and more on others.

This great scientist and a human lover lived until he was 83 years. Acharya's unstinted faith in the capacities of his own colleagues and students and his encouragement to them left behind a galaxy of scientists in our country. Sir Jagadish Chandre Bose occupies the highest position among them. Both Ray and Bose had to face a lot of hindrances in their pursuit of truth but the valuable results obtained by them through research work, which won them and Indians a high position in the field of scientific inquiry.

Acharya was a luminous example of plain living and high thinking. He was very human and showed that 'Example is better than precept' in his life. He infused a spirit of inquiry in the minds of his students. He imparted knowledge and gave away himself for their cause. The Acharya was the horlainger of Modern Chemistry in India. He roused a love for chemistry among his countrymen.

Rabindranath Tagore paid rich tributes to the Acharya when he said, 'The scientist unfolds the power that lies hidden in the material world. Acharya has gone even deeper by rousing the mused and the hooded power of sight, judgement and perception of many young men/ A devote of Wisdom is not rare, but the learned who could induce action in men by his personal example of character is difficult to find'.

Condensed from the author's prize winning Essay on P.C. Ray written during the Retreat for character Formation, September 22, 1977

(Published in 'The School Annual - 1977-78, Sri Ramakarishna Vidyashala, Mysore)

❐

Tiger

India a as been famous all over the world for her tigers. Tigers are not just flesh and bone, but a symbol of the jungle, of the cunning ferocity and strength. Whenever we talk of ferocity and strength, we take the tiger as the example. The tiger is the National Animal of India.

A tigress gives birth to more than six cubs at a time. At birth the cubs look like small cats with large face and paws but weigh heavier. But there is a well known period during which cubs are born. It is after the rainy season in November and April. A male cub will leave the family when he is one year old. It is said that if he does not leave before he is one year old, the father tiger kills him!

The height of tiger ranges between 36 and 44 inches. The average measurement round the forearm is 19 inches. It is 32 inches round the neck and 27 inches round the head. In summer is much shorter and paler in colour. Tigers are born with their full number of stripes and they will last all their life. In old age, however, they become little fainter. A tigress is smaller in size than a

tiger. The head of the male is bigger than that of the female. The male's head is larger than its neck unlike the females. The female weighs less than the male. The weight and the length of the tiger vary depending upon the environment and the surroundings. If the animal lives in a place where the food is plentiful, it puts on weight and grows in size. The length of the tiger depends on how the measurement is taken. One of the methods of measuring is to measure the animal following every curve on the body with a measuring tape from the tip of the nose to the tip of the tail.

Tigers are grouped according to their habits, some live on the game of the jungle with others prey upon herds of cattle and other domestic animals. There is some difference in the colouring. Some tigers are yellowish white, while others are of a deeper colour. The colouring also depends on the locality which they inhabit. Tigers inhabiting dark and dense forests would bear darker colour. This is a gift of nature to the tigers. When a tiger loses fear of man, it turns a man-eater. Tigers begin to kill human beings for food when circumstances rob them of their ability to obtain their natural food. Tigers are very fond of eating porcupines. Tigers disabled by human beings and deprived of the ability to earn their bread become their permanent enemies. Tigers do not like to interfere with the affairs of the human beings except when they are hard-pressed by hunger.

Tigers hate extremities of climate. They cannot bear bitter cold and cannot therefore be found in the Himalayan regions. They cannot bear severe heat either. They always like to live near water. Tigers are very thirsty animals and during hot weather, they often go in search of water to have a drink or enjoy a bath. Tigers though powerful are most sensitive to danger being excellent and ferocious hunters themselves, tigers are gifted with a wonderful power of sight and hearing. It is the power of hearing that tigers chiefly depend on while in thick forests, for detecting their presence of the game. Tigers

have a very fertile and long memory and remember all incidents that take place during the beat.

It is very difficult to imitate the noises made by tigers but there is a distinct difference between the call of the male is louder and more deep-throated than that of the female. The mating calls are short and sharp, while the challenging calls are louder with a prolonged resounding note. Tigers are highly individualized with many individual differences in character. Tigers are grouped under four mental attributes: the ambitious, the careless, the bold and the timid. A tiger will not kill more than he actually requires for food. Tigers cannot do without water and drink at least twice a day. Tigers on the whole are very good tempered unless they are wounded or man-eaters. It is well known that the tiger's smelling power is negligible but his power of hearing and the power of his eyesight are marvelous.

The tiger kills its victim with its teeth and not by the blows of its fore-paws. It begins to eat the victim at a spot of his liking. He will start with eating the hind-legs and gradually proceed towards the head. A tigress may weigh on average 240lbs. and a tiger 440lbs. The tiger's longevity is between 25 and 30 years. A tiger is not cruel at heart. When kills, he kills efficiently. He kills for food and unlike man he does not kill for pressure. Tigers are completely fearless but still they recognise the man as a superior being. A tiger in reality is not a foolhardy animal as most of the stories about him sketch him. A cat really hates water, but it is amazing how tigers love to take to water as soon as they get an opportunity. Tigers are very strong swimmers. White tigers are found in Assam. They are light coloured tigers. They are not an albino but a freak in nature.

The parts of a dead tiger are in the great demand. The skin is in great demand as many religious people use it as a seat during prayers. The claws and teeth are in demand for making talismans and putting round

children's neck to keep them away from the harmful efforts of witchcraft. The fat is used for removing rheumatism of the body. The flesh is in great demand for cutting foot and mouth diseases of cattle. Tiger's dung is used for curing piles. The gall stone of the tiger if applied to the eyes will stop the eye from watering. The tiger's brain mixed with sweet oil and rubbed on the body will cure pimples. Whoever eats half a pound of tiger's flesh will become impervious to snake-bite. Lastly, the powder of tiger's bones from the skull is a good protection against the evils of night-mare, dreams and other mental diseases. These are some of the uses of the tiger to man. It is, therefore, highly essential that great attention be paid to the sanctuaries and forests. Great things can be achieved through tiger-rearing. A tiger behaves as if he is conscious of his dignity as the king of beasts.

(The school annual, 1976, Sri Ramakrishna Vidyashala, Mysore)

So You Have Just Entered B.I.T.?

I came before last year
And was afraid
To enter any room
In the building.
I expect you too are scared,
But it will pass.
In time, we get used
To everything
Including failing
Our examinations!
What a life!
Such opportunity,
Such promise,
And such failure!
I wasted this year,
Next year I work
Well, that is what
I tell myself!
I wonder will next year
Be any better than year before last?
It could be, of course,
But I will really try
Next time? Or fall a prey
To every idle pastime?
Hope to meet you.
Hope you'll settle here
But not too well,
Not in a fix!

W.P. Krishna
II year B.E (Mech)

(BITANNICA, VOL-2, 1983, Bangalore Institution of Technology, K.R. Road, Visweswarapura, Bangalore- 560004)

Yet to win
Social, Economic and Moral Freedoms

Mahatma Gandhi, three days before his assassination, in his article in his weekly 'Harijan' dated 27th january 1948, observed that the Indian National Congress had won only political freedom and was yet to win "economic freedom, social and moral freedom" for the people of India.

Earlier, during the freedom struggle, the Congress, at its Lahore session in 1929 adopted the well-known Complete Independence Resolution, the Independence Pledge was formulated; setting forth the prime objectives of the freedom struggle and this pledge was thereafter being taken by all lovers of freedom at the public meeting on 26th January every year, the day which was called Independence Day during Pre-Independence days, the pledge spelt out that "The people of India, as any other people, have freedom and to enjoy the fruits of life so that may have full opportunities of growth."

What was thus started in the Independence Pledge was indeed in the nature of a mandate to all successive

governments in free India whichever of parties happens to be in power.

Social freedom

Social freedom essentially involves equality and social justice.

It is the rigid and unrelenting orthodoxy in the various castes and sub-castes that is firmly in the way of breaking down the caste barriers and also against the removal of untouchability and all it has come to mean. It calls for persistent, concerted and meaning efforts which involve common liberal education for all children.

Since removal of untouchability and ensuring the socio-economic, educational and cultural, educational and cultural uplift and well-being of all others is a dire necessity and human dignity for Dalits, all political parties, social service organizations and activists, should embark upon a country-wide Gandhian movement for the purpose by encouraging Dalits and non-dalits to live together, study together and carry on their activities together in common hostels, schools, dwelling areas and work places. However, the government, while planning and delivering various benefits to Dalits, should take care to ensure that Dalit leaders or Dalits in general do not develop a vested interest in those benefits

Steps should also be taken to see that women get equal representation in all elective bodies.

Social equality is not complete unless the tribals who are spread over in forest and semi-forest areas in various parts of the country brought on par, economically.

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Faith and Rituals: Gulf must vanish

Hinduism, considered to be one of the oldest religions of the world, has an unbroken history of about fifty centuries. It had a long period of renaissance the leading luminaries of which are Ram Mohan Roy, Dayananda Saraswati, Ramakrishna Paramhamsa, Swami Vivekananda, Annie Besant, Mahatma Gandhi, Rabindranath Tagore, Sri Aurobindo and Radhakrishnan to mention a few only. These illustrious personalities have by their lives, works and teachings given to Hinduism another extension of life both in our country as well as aboard.

All this cannot assure that Hinduism will live and inspire its followers for ever. The future of Hinduism depends on what future generations of Hindus will do with their great spiritual and cultural heritage. Also it will depend on whether this religion will be able to face all the problems of the present nuclear age and satisfy the moral and spiritual needs of the Hindus in the difficult days to come.

Fortunately, the modern renaissance, beginning with the work of that great statesman and reformer Ram Mohan Roy, has done a great deal of spade work which will make the path of the coming generations smooth and easy. Religion no longer stands in the way of our people going to foreign countries and the women from occupying the highest posts in the government or marrying anybody they choose. And, most important of all, the great caste system which most Hindus from the time of the Rig Veda have looked upon as an eternal arrangement made by God, is marching to its considerable fall.

The aim of religion is to bring into existence a species higher than man. That is why men in all ages and countries have clung to religion inspite of all the faults and mistakes. The defects and drawbacks of its manifestation are in the world of men. Hinduism is acclaimed as the most philosophical and at the same time most practical of all religion. Also, it must be confessed, it is a religion, which in account of its long history is associated with primitive and even harmful encrustation. Therefore the task that lies before it is to make its moral teachings effective, its knowledge more precise and accurate and to eradicate the evil customs and practices which hinder its progress.

Faith and rituals are like the head and tail of a religion. At present, there is a wide gulf separating them. Faith has moved on while rituals have remained stationary as they were centuries ago. Rituals have to be modified and made significant, and clearly expressive of the living faith and not the obsolete faith of the past generations. In a progressive Hindu community, rituals should always be prized more for their moral and spiritual values than for their sentimental and aesthetics values. More deplorable than this wide gulf between rituals and faith is the wider gulf between religion and morality. Morality indeed is the first step in religion and the attainment of divine consciousness is its last step.

A religion like Hinduism, with its long history, is found to have many age-old customs, superstitions, and beliefs which are to be eradicated for instance, in the course of its history, evils like Slavery, Sati, animal sacrifices, Polygamy, enforced widowhood, etcetera have been banished by the efforts of religious reformers like Ram Mohan Roy. In our own generation we have been witnessing the efforts made to remove the blot of untouchability, to make child marriages illegal, to abolish castes of tribal nature. Such efforts have to be continued with great vigour and determination in future. In fact, social service has to occupy a larger part of religion than before. Important as social service is, it should only be secondary to religious service. Worship, prayer and meditation are primary things in religion. All efforts at social amelioration should come only after these.

(Brahmavani, Monthly April 27, 1982)

❐

Raja Rammohan Roy
A thinker far ahead of his times

No man can emerge greater than his thoughts. What is one thing which separates visionaries from the others? Its good thinking. Good thinking results in good actions. And by changing one's action-based on good thinking-one changes not only one's life but also other's.

Raja Rammohan Roy could look behind the limits of space and time. Sir Brajendranath seal rightly called him 'a universal man in a universal procession'. A pioneer of the Indian Renaissance movement, Rammohan Roy sowed the seeds of Independence.

Swami Vivekananda and Mahatma Gandhi were influenced by his life and message. Swami Vivekananda enlisted himself as a member of the Sadharan Brahmo Samaj and his achievements as a spiritual ambassador of India had its roots in the Brahmo Samaj. Mahatma Gandhi was a member of the Ahmedabad prarthana samaj. Gandhiji's political experiment of non-violent national struggle for freedom through a touch of spirituality sprang from the socio-spiritual climate created by the Brahmo Samaj.

It was Raja Rammohan Roy who recognized the underlying unity in all religions and heralded a new religious perspective- the Brahmo Samaj- which in essence is the least common factor of all religions. He envisioned the concept of 'world citizen'. He was a shining example of the dictum: 'think globally, act locally'. Freedom won by distant France was a matter of personal celebration for him and he even shared his joy with his comrades by throwing a party in Kolkata.

He wanted man to humanize and spiritualize. By spirituality, he ment that which essentially parameters, all religions. In this endeavour to humanize, he undertook social reform work like the abolition of 'sati' and the spread of English education. He realized the importance of the English language as a door way to the international arena. He had said, 'The best way of serving God is to do good to man".

Another contribution of Rammohan Roy to the 21st century was his advocacy of the spirit of scientific enquiry- to never accept anything without question!

Raja Rammohan Roy's vision is as relevant for the 21st century as it was in the early part of the 19th century. He was undoubtedly a thinker far ahead of his times.

(Dharma Sadhani - A monthly journal in Telugu, April, 2006)

❐

On Rammohan's Internationalism

One of the things that has specially appealed to me in regard to the Brahmo Samaj is that Raja Rammohan Roy, the great founder of the movement was one of the great internationalists of modern world. Rightly was he hailed as the father of modern India, it was he who first held up the ideal of international friendship as the true ideal for all men and all nation. Rammohan exhibited this quality of internationism in more than one way. He proved himself a worthy internationalist by being a great linguist.

One of the things that keep nations apart is the difference in language. When we cannot communicate effectively to one another through the medium of one another's language it becomes rather difficult to come closer or to have intimate knowledge of the culture and the life of another's country. Rammohan was not only a versatile student of his own mother tongue Bengali but was also a versatile Arabic scholar. He was well versed with Hebrew and Greek as well as English. What made him learn all these languages? Not only because he was a

very wise man and had the aptitude for languages, but chiefly the languages were the keys to vast treasurers of human folk, because more specially of religious writings, which he wanted to be acquainted very much in the languages in which they had been written. He learned Sanskrit in order to study the ancient religious literature of our country. It is said that Rammohan once received a latter from a friend of his, in Tamil, a language unknown to him, which he scrupulously learnt and replied the same in Tamil!

He learned to read Hebrew, Greek and other languages in the shortest possible time to read the Bible and other scriptures. That made him intimately and sympathetically acquainted with the various religious systems of the world, rendering him impossible to be narrow-minded.

Probably, Rammohan was the first Indian well versed in Indian culture and at the same time found vast treasures of spiritual wisdom in other religions existed outside India. This in itself elevated Rammohan as an internationalist of his times. He was not merely concerned with the political ideal and social organisation, but he believed in the spiritual unity of mankind. He believed that there is such a thing as a common spiritual life which is shared by all mankind. He believed in the universal brotherhood of mankind. It was on such beliefs that Rammohan founded the Brahmo Samaj the followers which, eventually, came to be called as Brahmos. Nowadays a good deal of internationalism found on political spheres, in the scientific world or cultural acquirements. On the political front we co-operate for the common good of all. On the cultural front we recognise the essence of knowledge.

Truth knows nothing about national barriers. What is true in India is true in other countries. Mathematics does not vary according to countries in which we live. All discoveries are world-wide. They is acquisition. No

person with deep respect for knowledge and truth would ever say, "This knowledge is precious. I discovered this in Bangalore and no other city should have the advantage". Hence men with real respect for knowledge and truth are bound to be international. Religion, today, is not as international as it ought to be. Many a time men of other faiths have just a passing acquaintance with men of different religion. Religion can resume a position of leadership in human life, if only the various religions help one another rather than compete against one another. Any steps taken towards better understanding between one religion and another will not only lead to great religious unity but also a better atmosphere of brotherhood and peace in the world. In this direction, the role of International Association for Religious Freedom (IARF) is some what satisfying. No religionist ever opposes universality of brotherhood of man or of God.

Just as in genuine internationalism between nations we should develop our culture as much as possible so that we may have something in common to give to the whole of humanity. It is possible to remain loyal to one's particular form of faith and at the same time stretch out hands of love and sympathy to men of other faiths in the belief that all are children of God and therefore are friends in the spirit.

We rejoice our movement. We hail with special satisfaction, a movement which first stretched out hands of love, regard and respect for other religions across the walls which have grown up by age-old traditions.

(Brahma Vani, July 27, 1984)

Red Cross: A Matchless Humanitarian Movement

Origin of the Red Cross

The idea of Red Cross was born in 1859, when Henry Dunant, a Young Swiss Businessman, witnessed the scene of a bloody battle in Solferino (Italy), between the armies of the imperial Austria and the Franco-Sardinain alliance. Around 40,000 men lay dead or dying on the battlefield, the wounded was lacking medical attention. He organized local people to attend to the soldier's wounds and to feed and comfort them. On his return to Geneva, he called for the creation of national relief societies to assist those wounded in war and sowed the seeds of the Geneva Conventions.

The Red Cross was born in 1863 when five Geneva men, including Henry Dunant, set up the international committee for relief to the wounded later to become the International Committee of the Red Cross (ICRC). The following year, 12 governments adopted the first Geneva Convention; a miles stone in the history of humanity, offering care to the wounded and defining medical services as "neutral" on the battlefield.

The International Federation of the Red Cross(IFRC) was founded in 1919(then called the league of Red Cross) in Paris in the aftermath of World War I to assist the victims of natural disasters and provide basic health care and welfare services to the affected community. The International Federation comprises of 185 members (Red Cross and Red Crescent Societies), a secretariat in Geneva and more than 60 delegations strategically located to support activities around the world.

Mission Statement

The federation's mission is, "To improve the lives of vulnerable people by mobilizing the power of humanity".

Vulnerable people are those who are at greatest risk from situations that threaten their survival, or their capacity to live with an acceptable level of social and economic security and human dignity. Often these are victims of natural disaster, poverty brought about by social and economic crisis, refugees and victims of health emergencies.

Henry Dunant's two Main Proposals

The first proposal called for the establishment of relief committees whose members should be trained in peacetime to render relief and medical assistance to victims of wars. This proposal led to the birth of the International Committee of the Red Cross in 1863 and subsequently, National Societies.

The second proposal was to establish rules that would alleviate the suffering of the victims of armed conflict. The first diplomatic conference was held in 1864 and the first Geneva Convention was adopted, which led to the birth of modern International Humanitarian Law. During this conference a distinctive neutral sign to identify the relief medical committees and the army medical services was adopted, which is Red Cross on a white ground, the reverse of the Swiss flag, to honour the country in which Red Cross was founded. The Red Crescent is used in the place of the Red Cross in many

Islamic countries and Red Crystal has adopted as an additional emblem.

A global humanitarian movement

The International Red Cross and Red Crescent Movement is composed of the National Societies, the International Committee of the Red Cross and the International Federation of Red Cross and Red Crescent Societies.

Together, the three components of the movement are guided by the seven fundamental principles of the Red Cross and Red Crescent movement: **humanity, impartiality, neutrality, independence, voluntary service, unity and universality.** All Red Cross and Red Crescent activities have one objective- to help those who suffer without discrimination and thus contribute to peace in the world.

The International Committee of the Red Cross (ICRC)

Established in 1863, the International Committee of the Red Cross is the original actor of the Red Cross and Red Crescent movement.

The International Committee of the Red Crosses (ICRC) is an impartial, neutral and independent organization. Its exclusive humanitarian mission is to protect the lives and dignity of victims of war and internal violence and to provide them with assistance.

The International Federation Red Cross and Red Crescent societies

Founded in 1919, the International Federation Red Cross and Red Crescent societies is a federation of all the national societies recognized by the International Committee of the Red Cross. The federation inspires, encourages, facilitates and promotes at all times all forms of humanitarian activities by the member societies with a view to prevent and alleviate human suffering

thereby contributing to the maintenance and promotion of world peace.

National Red Cross and Red Crescent Societies

National Societies are national voluntary organizations acting as auxiliaries to the public authorities of their own countries in the humanitarian field. Together, 105 million volunteers and 300,000 employees in the national societies all over the world assist some 233 million beneficiaries each year.

These societies focus on:

- Promotion of the movement's fundamental principles and humanitarian values
- Disaster response
- Disaster preparedness
- Health and Care in the community

Birth of Indian Red Cross

At the outbreak of the First World War in 1914, no Red Cross organization existed in India. The St. John Ambulance Association carried out Red Cross work in addition to its normal activities until August 1916.

A bill to constitute the Indian Red Cross Society, independent of the British Red Cross, was introduced in the Indian Legislative Council on 3 March, 1920 by Sir Claud Hill, member of the Viceroy's Executive Council who was also chairman of the Joint War Committee in India. The bill passed on 17 March 1920 and became act XV of 1920 with the assent of the Governor General on 20 March, 1920.

On 7 June 1920, fifty members were formally nominated to constitute the Indian Red Cross society and the first managing body was elected from among them with Sir Malcolm Haily as the Chairperson.

Thus, the Indian Red Cross Society was established in 1920 through act of the Parliament which recognized the movement in 1929, mandated to support war victims

and to alleviate human suffering especially health related, through community mobilization. The society has 34 state/ UT branches and more than 650 district and sub-district branches. The President of India is the President of the Indian Red Cross Society. The Secretary General is the Chief Executive of the Society.

The Indian Red Cross managing body is responsible for governance and supervises the functions of the society which include:

- Delivering emergency relief during natural and man made disasters
- Working together with communities in psycho social rehabilitation
- Training communities in disaster preparedness
- Ensuring availability of water and providing sanitation services
- Providing First Aid Training
- Protecting civilian life by disseminating Geneva Conventions
- Providing services for serving soldiers and ex-soldiers
- Reuniting families in disaster and conflicts
- Conducting awareness programmes for HIV / Aids
- Delivering community welfare programmes
- Organizing blood donation campusto provide safe blood
- Junior and Youth Red Cross

Working Style- Voluntary Service

It is a voluntary relief movement not prompted in any manner by desire for gain.

All people will be in need of help some time and all have something to give. Every contribution is meaningful, no matter how small it is. The receiver who gets the right assistance is important.

Voluntary is applicable both for giving and receiving help. To help voluntarily does not mean that one abandons the quality of help. It is often necessary to have fundamental education so that one could give right help and protection in difficult situations.

Selfless help means that the Red Cross does not have any personal interests to satisfy. The organization's interests coincide with the people whom it assists. A Red Cross worker must respect that someone does not wish to take assistance, even if one is convinced that it is required. When one takes up a task, it means that it has to be done in accordance with the principles of the organization. It is also voluntary to become a member of the Red Cross. The employed staff within the Red Cross shall create opportunities and increase possibilities for voluntary contributions.

Opportunities and benefits of a Red Cross Member

By becoming a member of the IRCS, one can:

- Make a commitment to the fundamental Principles of the Red Cross.
- Contribute to the humanitarian efforts of the IRCS in India and abroad.
- Receive the latest information and progress reports on the IRCS programmes.
- Play an active part in the growth and development of the organisation, which has given unparalleled support to the vulnerable people since its inception.
- Become a member of world's leading humanitarian organization.
- Work for Red Cross globally and represent it in international forum.
- Become part of efforts made to enroll members to Generate Funds for Humanitarian Endeavour of the IRCS.

- o Be selected for award for exemplary work.
- o Get Red Cross identity card, certificate & badge.
- o Participate in the election and decision making process of the organization.
- o Participate in the Annual General Meeting (AGM) presided over by the District Magistrate/H.E. the Governor of the state/UT and in National AGM presided over by H.E. the President of who is the President of India the society.
- o Participate in the training programmes in the field of disaster management, health and family care, international humanitarian law, etc.

(ಸೇವಾಜ್ಯೋತಿ ಸ್ಮರಣ ಸಂಚಿಕೆ, 8–7–2009; ಭಾರತೀಯ ರೆಡ್ ಕ್ರಾಸ್ ಸಂಸ್ಥೆ, ತುಮಕೂರು ಶಾಖೆ)

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R.G. Padki: A Gentleman Par Excellence

Men are remembered not for their power, position or wealth but for the work they do during their life time.

With the passing away of Shri R.G. Padki, Karnataka has lost a great social activist. A good part of life was spent in strengthening youth movement at the state, national and international levels. He was the founder, National Secretary Of Youth Hostels Association of India, a part of the International Youth Hostel Movement.

Youth work was his forte. His enthusiasm to inculcate a spirit of adventure in the youth was remarkable. He organised youth activities aimed at moulding the overall personality of young people for over six decades. Thousands of young people including me who came under his influence always remember his spirit of service and sacrifice. He would always encourage young people to dare and take upon challenges in whatever sphere of activity they chose to. He was full of positivity.

He was a great source of inspiration to the National Himalayan Trekking programmes organised by the

Youth Hostels Association of India during the last four decades or so. Participants over the years from all over including Karnataka spoke very high of Shri Padki's effort including Karnataka spoke very high of Shri Padki's contribution in moulding the younger generation can never be forgotten.

He always shunned praise. He worked with single-minded devotion without caring for name or fame. He had won thousands of admirers across the length and breadth of the country by sheer dint of simplicity and kindness which he demonstrated even during the toughest of times. He was a rare example of a selfless volunteer who always put service before self.

Shri Padki lived a long and fruitful life. One could not see any gap between what he thought, said and did. He was truly a gentleman par excellence rare to find in these days. Though Shri Padki has left his mortal coil, his spirit will continue to linger on guiding many youth workers including myself. I pay my humble homage to this great son of Karnataka.

(A TRIBUTE - R.G. Padaki
Youth Association of India, (Bangalore South),
Indian Foundation for Global Education, 2010)

Sir M.V.: A Life Worthy of Emulation

Bharat Ratna Dr. Sir M.V. Visvesvaraya (1860-1962), an Engineer-statesman, was without doubt one of the important influential makers of modern India. His beginnings were humble. Faced with acute poverty, he lost his father at the age of 15. He was ranked first in L.C.E. which is equivalent to today's B.E. degree in civil engineering and went on to become one of the finest civil engineers of his time. He fathered a number of projects that still speak of his incomparable ingenuity and commitment.

Sir M.V. was called to be the Diwan of Mysore. He made use of this opportunity to build Mysore as a model state which even won the appreciation of Mahatma Gandhi. He believed in industrialization and did everything possible to put India on the map of industrialized countries.

Sir M.V.'s life is too large to be encapsulated in a short article of this kind. However an attempt is made to present here some of his words of wisdom which are relevant to our rising generation.

Value of time

We should all realize that time is invaluable. Unfortunately laziness is traditionally confused in our people's mind with good living. Unless our people realize that laziness is shameful, there can be no salvation for us.

Importance of education

For everyone to work, it is necessary for them to be educated. Let education be the prime motive for this century. The teachings of our ancient scripts are good but their background and interpretations are intriguing. These were tuned to the conditions obtaining thousands of years back. Today's youth start life without clear understanding of life's values. The ideals of old were suited to those times. We have to keep abreast of present time. We should adopt ourselves continuously. Otherwise, we will forever be left behind in this race. Our lack of education is responsible for our country's poor financial health. Our people are not aware of the conditions in the rest of the world. They have hardly any experience in different professions. This further aggravates our financial sickness.

Discipline

No greatness can be achieved without an aim, without discipline and without hard work. Unless these virtues are practiced, there can be no expertise.

Work is worship

The people's level of awaking has to be raised. Their expertise should be cultivated to their financial advantage. The number of occupations available must be increased. Everyone capable of working, must be made to work. Work, efficient work and organised work alone can deliver our country. We must work together. Everyone who can work, every who can earn, must be made to work. We must eliminate the lazy and the indolent. Only then can our land achieve salvations.

Co-operation

An attitude of co-operation must be cultivated in trade, industry and civic administration.

Work efficiency

The progress of a country is measured by its heavy industry, by its trade and commerce. We have not paid the attention to the collection of statistics. Compared to developed countries, our work efficiency is poor. Our per capita income hardly exists. Our people's average life span is low. Our poor live in an all-pervasive dark world of their own.

Be not job seekers

What an irony of that everyone who is trained to earn living still comes to the doors of Government to seek a job! Think, all work was being done all these days by Government only. In future this work should be shared between the Government and the pubic. The thinking aspect of all jobs should ultimately be left to the general public.

On the Farming Community

Resistance to change and fatalism are ingrained in the farmer's psyche. Unless he is taught to get rid of these qualities, there is no salvation either for him or for the country unless we encourage people towards better achievements, we value their qualities and skill, and their expertise will not develop. With the simultaneous population explosion, they will turn out into illiterate, unthinking vegetables. Such people will prove absolutely helpless in times of difficulty such as famines. Destiny, resignation to fatalism are all pessimistic thoughts. They have made a life-term prisoner out of our farmers. We must make our farmer think, awaken. Only then will he not resist change and turn his attention towards self-improvement. He will then gradually gain the ability to change with the time. Only when the people's awareness improve, he will gradually gain the ability to change with

the time. Unless the people's awareness improves, unless there is interaction between the land's resources and capital, the country cannot prosper.

On industrialization

What is a future plan? Are we going to wake up and be actively employed or are we going to decay a die? This is our most vital question. Look at our industry. It is at low ebb. Look at our education levels. They are no better. Take our living standards. They are alarming. Look at our education levels. They are no better. Take our living standards. They are alarming. Look at our attitude towards co-operative, less said about them, the better. Optimism, ideas, efforts, we have almost forgotten these words! We must educate our people regarding the finer aspects of financial progress. We should make them realize their ultimate financial potential. If we depend on just agriculture alone, our progress will be limited. The more we develop agriculture and industry simultaneously. The better it will be for us.

On systematic work

Work steadily to build up your worth and power, keep your conscience in rectitude, and let all the ends thou amidst at be thy country's thy gods and truths. For both success and happiness, reliance has to be placed on work- organized disciplined work, rather than on contemplation.

His guiding principles were:

- Never to use one's official position to bestow favour on one's relatives.
- An ounce of neatness is equal to a ton of efficiency. A well-dressed person does things in a much better way than a slovenly one.
- That a person who is neat in his dress can be clean and straight in his life.
- Industrialize or perish.

- Always support a worthy cause at any cost.
- Nature never excuses lapses.
- Never tolerate slipshod work! Things should be precise and not vague.
- Be punctual and expect everybody to be so.
- Five hours for nature, seven for a very busy man and nine means lazy was his National budget for sleep.
- Hard work performed in a disciplined manner will in most cases keep the worker fit and also prolong his life.
- Every man who has become great owes his achievements to incessant toil.
- The way man to build a nation is to build a good citizen, the majority of the citizens should be efficient of good character and possess a reasonably high sense of duty.
- Leaders should be truly patriotic and should believe in rectitude of conduct. Men of merit and capacity should be selected for all special jobs and Government appointments.
- Duty before comfort was his ideal.
- He believed in the famous maxim "everything worth doing is worth doing well"
- God helps those who help themselves.
- Be punctual not only in keeping your engagement but also in all other respects. Note books and pencils should be your inseparable companions.
- Live within your income. Have a purpose to give you any pleasure.
- It is worthwhile in life to make a pleasure of duty than a duty of pleasure

(Material for this article is collected from various sources.)

(Report on Twentieth IEI Convocation & Techicians/ Students Convention, Bangalore 4 Nov, 2012; Karnataka State Centre, The Institution of Engineers (India).

Brahmo Samaj Leader and Gandhian W. H. Hanumanthappa

The year 1885 is an important one in the history of free India. The Indian National Congress took its birth in that year. It was in the same year on 24th December in the erstwhile Mysore state; Sri W.H. Hanumanthappa was also born. He grew up with the inspiration of the both Raja Rammohun Roy and Mahamatha Gandhi. He raised to great heights and became a frontline national leader of Mysore state carving out for himself a permanent place in the hearts of the people by self service in the domain of both spiritual and political regeneration so characteristic and unique for a Gandhian.

Public life

Coming from a village Wooday in Chitradurga District, Sri Hunumathappa was brought up in a traditional family moored in the cultural heritage of an Indian village. He engaged himself in mining business. He made Bangalore his area of public service right from his youth. He was an embodiment of high thinking and simple living; always eager to serve the needy. He lived in a small lane in Balepet named after his father Wooday

Hanumanthappa. He was always in the company of the poor, to whom he rendered signal service by his counsel and gave them his moral support which he could afford.

He was a member of the Mysore Representative Assembly, Constituent Assembly, Legislative Assembly and Councillor of the then Bangalore City Municipal Council for nearly three decades. He also adorned the office as the first elected congress president of the Bangalore City Municipal council in 1941. In Municipal Politics, he was engrossed in the service of his fellow citizens being broad-minded, liberal in outlook and with graceful courtesy he was always thinking and doing his best to help them. He was one of the founders of the Mysore Congress and even before that, he took part in mobilizing public opinion as an active participant in the Mysore People's Convention, held under the aegis of Late M.Venkatakrishnaiah, the grand old man of Mysore politics during 1920s and 30s. He was always in khadi dhoti and coat and on which he used to wear an Angavastra like a typical old Mysore Gentleman of high esteem. He was also the main driving spirit of the congress in Bangalore during pre-independent days.

Gandhian constructive work

Sri Hanumanthappa was associated with several important public service organizations and he found time and energy to serve them with sincerity of purpose and championed the cause of the poor, the downtrodden and the affected sections of society. He was president of Brahmo Samaj for over forty years and a trustee of Srinivasa Mandiram & Charities, Balepet. A firm believer in Gandhian Constructive Work, he was one of the founder members of the Mysore State Adult Education Council, Thakkar Bapa Harijan Girls' Hostel and Gandhi Sahitya Sangha, Malleswaram. Besides these public bodies, Sri Hanumanthappa took keen interest in promoting Educational Institutions. For instance, Arya Vidya Shala, Gandhinagar High School, M.E.S. College, Appavu Pillai Girls' School are some of the institutions which, of late, have grown as major education centres.

Brahmo Samaj

Sri Hanumanthappa was drawn towards the Brahmo Samaj faith even when he was only an eight year old boy when Sri Brahmananda Swamy presented him a copy of the Kannada version of "Brahma Dharma". He kept this book as a very valuable possession till his last days. Brahmo theism filled his mind and heart and he made serious study of all Raja Rammohun Roy's works. He also authored and published a popular biography of Raja Rammohun Roy in Kannada. He has gifted a Bust of Raja Rammohun Roy which is installed on an Oval opposite to Woodlands Hotel in Raja Rammohan Roy Road, Bangalore, to serve as a source of inspiration to passers by.

Philanthropy

Sri Hanumanthappa's philosophy has been reflected in the munificent donations he had made to a number of service institutions in and around Bangalore. He had not only made material donations but had gone out of his way to put these institutions on a sound footing by his own unique personal services. He was a trustee of his wealth in the true sense of the term holding it in true for the service of society.

Sri Hanumanthappa passed away on 30th December 1977 and merged in the universal spirit which he had cherished in his heart throughout his long life.

In recognition of his long and dedicated services, an important road in Gandhinagar, Bangalore, is named after him. Lokpal Education Society is running a pre-university college in Hulikunte, Sira taluk, Tumkur district in his memory. An annual lecture on a topic of public importance is held on 24th of December every year in memory of Sri Hanumanthappa by the Gandhi Peace Foundation, Bangalore centre, as part of its endowment programme.

(A Pen Sketch by Wooday P. Krishna, December, 2005

Noble Bust

Recognise the marble bust?

It is of Raja Rammohan Roy, and you'll find it as you approach Kanteerava Stadium from Richmond Circle. This road is known as Raja Rammohan Roy Road, by the way, and few would know this.

Few also, would know much about this man. Born into an orthodox community in 1772, he was a great social reformer, standing up for the emancipation of woman, universal brotherhood and a free, modern India. He founded the Brahmo Samaj.

Last week, his 150th death anniversary was celebrated by the Raja Ram Mohan Roy Citizen's Committee in Bangalore. The Committee has asked the Corporation and Urban Arts Commission authorities to maintain and protect this white marble bust (Rammohan Roy's bust is found only in a couple of places in India). The plates on the side of the statue have become dull and the inscribed words are scarcely legible.

The bust was donated and erected by W.H. Hanumanthappa, former mayor of Bangalore and sculptured by a reputed sculptor of Jaipur. It was unveiled by the then Governor Mr. Govind Narain in September 1978.

Just as the Raja sought to bridge the gulf between the ancient and the modern in our land, the bust stands at a point where the old city of Bangalore is linked with the new Cantonment area.

The best way of Serving God is to do good to man.

- Raja Rammohun Roy

AROUND TOWN, C.K. Meena, The City TAB, October 2, 1983

Alumnus speaks :
How Swami Vivekananda has inspired me

My mind goes back to the wonderful days I spent at Sri Ramakrishna Vidyashala, Mysore, between 1975 and 1978. It was here that I first heard of the holy trinity Sri Ramakrishna, Sri Sarada Devi and Swami Vivekananda. Vidyashala was unique to us all in the sense it tried to translate into action the philosophy of education envisioned by Swami Vivekananda. It was here that I was exposed to basic human values, self-reliance, team spirit and leadership action.

We were fortunate to listen to discourses given by great monks like Swami Somanathananda, Swami Harshananda, Swami Sureshananda, Swami Jagatmananda and Swami Agehananda. They inspired us with the sayings and exhortations of Swami Vivekananda. We were also fortunate to listen to the lectures of Swami Ranganathananda (who later became the president of the Ramakrishna Math and mission) when he took part in the silver jubilee celebrations of the Vidyashala. He urged us to have a 'mission in life'. 'Don't become money earning machines. Even race horses earn

money', he said. It was listening to these very words changed my out look in life.

I have read the complete works of Swami Vivekananda more than once. His famous message in a letter to the prince of Mysore, 'They alone live who live for others; the rest are more dead than alive', caught my imagination. Swami Vivekananda's emphasis on organization and organized efforts impressed me the most. Swami Vivekananda spoke eloquently on the power of unselfish work. The basic principles on which he founded the Ramakrishna Math and mission are simply an eye-opener to the present day religious and spiritual institutions. Swamiji said, 'Shun praises. Be away from publicity of every kind. Be transparent in your dealings. Keep away from politics. Forget yourself in your work'. He cautioned, 'Be calm and silent and steady in your work, do not be a humbug, no name-making. You must always remember.'

I set myself on a mission to unfold unselfishness, truthfulness and purity in public work. I began associating with good and great organizations networking with good and great people. I divided my service activities into four assets: education, humanitarian work, youth work and national service. If I have achieved some success in my endeavour, I owe it all to Swami Vivekananda's inspiring words, 'Be always ready to concede to the opinions of your brethren, and try always to conciliate. That is the whole secret.'

(Wooday P. Krishna Studied Vidyashala from 1978 (Silver Jubilee Batch).

Article published in 'Voice of Vidyashala Alumni' -News letter of the Old Boys' Association of Sri Ramakrishna Vidyashala, Mysuru, July 2013.

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Re-engineering India, the Gandhian way

Over six decades have passed after India won freedom but the objectives of our freedom struggle are yet to be translated into reality. The independence pledge which used to be taken during the freedom struggle asserts 'the unalieable right' of the people of India, 'To enjoy the fruit of their toil and have necessities of life so that they may have full opportunities of growth'. Successive governments in free India have not suceeded in ensuring the enjoyment of this right by all people in the country. Three days before his assassination, Mahatma Gandhi, in the Harijan dated 27-1-1948 observed that the people of India were yet to win Economic freedom, Social and Moral freedom' thereby clearly emphasizing that our freedom is incomplete.

Few western countries are affluent. They are prosperous. Our earlier planners copied the western models of development. They ignored the fact that Western Countries like Britain, America became affluent by exploiting other colonial countries.

India became independent after the Second World War. Gandhiji wanted India to adopt a non-exploitative economic pattern based on the rural economy. Our planners did not follow the path shown by Gandhiji. We are experiencing the result of this wrong path. There is exploitation of the poor by the rich. The rich is becoming richer and the poor, poorer.

Agriculture and industry are two major resources which can generate employment. Our target is to become self-sufficient in our food requirement and this is possible through agriculture. After Independence we built dams and brought new high-yielding varieties of seeds. These went in an adverse direction and brought harmful result. For instance, excess water through irrigation canals resulted in creation of wet deserts which brought alkalization and water logging. The other consequence for buildings dams was the displacement of large number of people who lived in that area. We destroyed forests and gave room for ecological imbalance. Gandhian economist J.C. Kumarappa suggested that the best way to check the surface water flow is by constructing contour bunds and check-dams instead of going for big dams. He opposed use of chemical fertilizers which upset the chemical composition and biological sustenance of the top soil.

Use of high-yielding verities of seeds requires larger quantities of water, chemicals and fertilizers which make the farmer dependent on commercial interests to supply these needs. This has led to sacrifice of bio-diversity and the farmers increase interests for the benefits of commercialization. Kumareppa opposed use of petroleum products and all machines that made their use necessary. Our age-old bullock economy is shattered.

Gandhiji was never against science and technology. He wanted science and technology to be adopted in such a way as to suit a nature friendly pattern of production

and to reduce the capital requirement, reduce the energy required and at the same time, provide opportunities for self-employment to more and more people.

Gandhiji advocated decentralised production pattern. Decentralised production does not displace rural population and it goes with our age old culture. Technology can be adopted to improve the efficiency of our villages. To meet our daily requirements we have to adopt decentralised pattern.

Ram Pratap in his book Gandhian Management: 'Gandhi never used any adhoc method in his search for solutions to the problems he encountered in his life. He studied the genesis of problems, the ground realities and legal implications; only, then he decided the methods and means to attain the goal. Also as a engineer, he was always reinventing himself and his environment by applying checks and balances to adapt to the changes without changing his rock-solid philosophy. His approach for managing man, machine, materials and methods, were not derived from any legislation, force are fright, gut were the distillate of humanitarianism and an outcome of self-actualization and introspection sustained by an inner force and inner discipline.'

Gandhiji's fundamentals for changing the world were:

- Change yourself
- You are in control
- Forgive and let it go
- Without action your not going anywhere
- Take care of this moment
- Every one is human
- Do not ever give up
- See the good in people and help them
- Be in harmony with thought word and deed

- Continue to grow and evolve
- Gandhiji outlined three basic principles of Sarvodaya or the welfare f all :
- Good of the individuals is contained in the good of all.
- All have the same right of earning their livelihood from their work.
- A life of labour is the life worth living.

Gandhiji offered a 'talisman' to be used as a litmus test to evaluate a policy or decision. Call to the mind, he said, 'The face of the poorest and the weakest man you may have seen, and the ask yourself if the step you contemplate is going to be of any use to him.'

- Policy must always be decided by a majority vote, but it does not cancel the minority vote.
- Process defines results. Means are as important as the ends.
- Build on what you have.

On the occasion of the 26th Indian Engineering Congress, let us dedicate ourselves to re-engineer India on Gandhian lines always keeping in mind the interest of the poorest and weakest of our countrymen.

Aeromag Asia Special Issue
26th Indian Engneering Congress, December 2011

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Socialism: A Gandhian Perspective

Mahatma Gandhi, Considered to be one of the greatest Asians of the 20th century, had a distinct dream of India. He says:

"I shall work for on India in which the poorest shall feel it is their country, in whose making they have an effective voice, an India in which there shall be no high class and low class of people; an Indian in which all communities shall live in perfect harmony. There can be no room in such an India for the curse of untouchability or the curse of intoxicating drinks and drugs. Women will enjoy the same tights as men. We shall be at peace with all the rest of the world. This is the India of my dreams".

The earliest literature available for us wherein Gandhi reveals his mind is his 'Hind Swaraj' published in 1906. One of the salient features of 'Hind Swaraj' is that Gandhiji spoke for the time of "limiting our wants." Soon after his return from South Africa in 1941, he led the national struggle for freedom from 1914-47. According

to Gandhiji, Swaraj means freedom-political, social, economic and moral.

We conclusively achieved political freedom in the 15th of August 1947, but we are yet to win social, economic and moral freedom as envisaged by Mahatma Gandhi. The core of Gandhiji's life agenda was fight against poverty.

Gandhiji advanced his economic ideas along with his political agenda during the freedom struggle. J.C. Kumarappa, a well known Gandhian Economist presented to the world a new terminology called 'Gandhian Economics' covering whole gamut of Gandhiji's economic ideas.

On the advice of his political guru Gopalakrishna Gokhale, Gandhiji undertook Bharat Yatra as a third class train traveler. Gokhale said: "Go to the people; know them; love them; work among them." It is with this message that Gandhiji started his Bharat Yatra. He was able to understand clearly the body, mind and soul of India. He was able to have a wonderful grasp of the social, economic reality of his times.

The core of Gandhian economics is "economics self-sufficiency". Socialism was natural to Gandhiji. He very clearly identified the exploitive design of the British. He used swadeshi and non-cooperation as tools of his struggle for freedom. Gandhiji targeted European clothing symbolically as a source of mass unemployment and poverty. He advocated khadi as a means of peaceful civil resistance to promote national self-sufficiency. In fact, Gandhiji led farmers' satyagraha in champaran and kheda against mill owners who were backed led by the British Government to end oppressive taxation.

To Gandhiji's concept of "Ashram" is noteworthy. He pioneered ashram settlement called "Phoenix settlement" in South Africa. This is compared to a typical commune where people produced their own food, clothing and means of living. Gandhiji promoted values

of equality and co-operation and promoted the notion of trusteeship in his ashram way of living. Gandhiji practiced the lifestyle of self-sufficiency, personal and spiritual development through the concept of "Ashram".

The fulcrum of Gandhian Wheel of Life was truth and non-violence. Contrary to Indian socialists and communists, Gandhiji rejected class welfare and class-based revolution. To him, preservation of human dignity was far greater than material development. Gandhiji believed in non-violent humanistic socialism. He swore to the maxim that 'Thing is done without the consent of anyone'.

Gandhiji accepted democracy as a way of life. To him, man was more important than money. His economic thought revolved around simple living. He rejected consumerism in all forms. Gandhiji never advocated increase in standard of living but always spoke of increase in the standard of life.

When Gandhiji spoke of economic equality, he asked whether the ant and elephant could be given the same quantity of food. He paid highest attention to the prime needs of the weakest sections of the population. He gave to the world the concept of Sarvodaya which spoke of the right to earn according to one's capacity using just means. In other words, 'to each according to his need'.

Gandhiji focused on non-violent rural economy. Towards this end, he advocated four ideas:

1. Trusteeship
2. Decentralization of economic activity
3. Labour intensive technology
4. Priority to the weaker sections

Gandhiji felt that character of production is to be decided by social necessity and not by personal greed.

Gandhiji clearly said that recourse to class warfare and mutually hatred will be suicidal. He spoke of

socialism free of exploitation. According to him, all are born equal. Everyone has a right of equal opportunity. All have not the same capacity, Ahimsa or non-violence is an essential attribute of society.

When Gandhi spoke of economic equality, he made it clear that it does not mean that everyone will literally have the amount. He clarified the distinction between 'Equal Distribution' and 'Equitable Distribution'. According to him, reforms cannot be rushed. He favoured educating both the 'haves' and the 'have notes'.

Gandhiji spoke eloquently about nationalization. He never favoured all the means of production to be nationalized. He favoured both 'planned production' and 'private enterprise'. He said, 'If you have only state production, men will become moral and intellectual paupers.' He further said, 'I would allow capitalists and zamindars to keep their factory and land but I would make them consider them Selves as trustees of their property'.

Gandhiji never admired poverty. He felt that everybody should be able to get sufficient work to enable ends meet. When he advocated elimination of machinery cause mass unemployment.

Today capitalists and communists both have proved to be imperfect. Gandhian method of transforming society through trusteeship seems to be the media between capitalists 'chaos and communists' rigidity.

'Sevadhara'- A Sovenior ಗಾಂಧಿವಿಚಾರ ಪ್ರಣೀತ ರಾಜ್ಯಮಟ್ಟದ ರಾಷ್ಟ್ರೀಯ ಸೇವಾ ಯೋಜನೆಯ ಸ್ವಯಂ ಸೇವಕರ 12ನೇ ವರ್ಷದ ವಿಶೇಷ ಕಾರ್ಯಾಗಾರದ ಸ್ಮರಣ ಸಂಚಿಕೆ, 24–25 ಜನವರಿ 2014, ಎಚ್.ಕೆ. ವೀರಣ್ಣಗೌಡ ಕಾಲೇಜು ಎಚ್.ಕೆ.ವಿ. ನಗರ, ಮದ್ದೂರು–571 428. ಮಂಡ್ಯ ಜಿಲ್ಲೆ.

Whither Gandhiraj ?

Poverty, it has to be admitted, is perhaps the worst evil that has befallen our country. It has brought in its wake several other handicaps and disadvantages to the people of India such as starvation, semi-starvation, mal-nutrition, ill-health, deprivation of education to children, various forms depravity, child labour, beggary, flesh trade, backwardness and several forms of exploitation. It is the root cause of the steadily spreading Naxalism. While it should indeed be the topmost concern of the government and of all political parties, they are doing precious little to tackle this gravest of problems. In one of its latest findings, the United Nations Organization has said that one-third of the poorest people in the world are found in India, while the National sample survey two years ago found out that 67% of the people of India live below the poverty line which conforms to an average income of Rs. 22,000/- per family of the poor per year.

When Mahatma Gandhi finally returned to India from South Africa and soon after undertook a country wide

tour as asked by his political guru, Gopalakrishna Gokhale, the one thing that glaringly came to his notice was, in his own words, "The grinding poverty of the millions". Things today are not much different from what they were at that time, and this is very much amplified by the findings of the UNO and of the National Sample Survey as mentioned above. But, why are the government and the various political parties virtually glossing over the matter. Time has now come to do something to remind them of the first duty that lies before them, that is, to eradicate poverty once and for all.

The Planning Commission was constituted by Prime Minister Pandit Jawaharlal Nehruji following the model of the then Soviet Russia. Now, after its long life running into several decades, this body has naturally become stale and second thoughts have naturally arisen to take a relook at it.In the present situation, our main task should be to take recourse to appointing rapid action task forces in a few conspicuous socio-economic sectors so as to benefit all sections of our population.

They are:-

- Poverty eradication
- Housing
- Sanitation
- Trade and commerce national and international
- Roads, transport and communication
- General and occupational education for the young and the elderly
- Socio-economic upliftment of dalits and their integration into Hindu Society on equal terms with all others.
- All-round socio-economic and political empowerment of the people.

There is of course the need for constant supervision and co-ordination. The best agency for this all-important task is the Prime Minister's Office (PMO).It is obvious that the Planning Commission is not the appropriate body for these tasks. Hence, the need and advisability for Rapid Action Task Forces to take up the above tasks to ensure the overall development of the Country. Planning is of course necessary for all these tasks. For this, each of these task forces can have its own planning wing to do the planning for every stage of development coming under its purview.

The slogans that were being shouted during freedom struggle were: " INKILAB ZINDABAD", "HINDUSTHAN HAMARA", "THODE DINME GANDHIRAJ". Raj, of course, did come. But, it has not become Gandhiraj. It is 67 years since India became free. Should we not, at least now, try to usher in Gandhiraj ?

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Nation Building Teachers

I came across a beautiful statement which could be the theme for our Teachers' Day, "All over the world, children walk to school and run back home". I feel that it is the duty of every teacher to reverse this trend.

Swami Vivekananda said that the goal of mankind is knowledge. Instead of imparting knowledge to our young minds, we are dumping them with information – wanted and unwanted – only to make them half educated. According to Swamiji, education can never be complete without both spiritual and secular education. By spiritual education, we mean the growth of inner self and by secular education we mean education for our livelihood. Swamiji rightly emphasized the total growth of moral and intellectual personality. Morality, according to him, is an inward reality in the ethical man. Unfortunately our present system of education seems to be producing money-earning machines and not wholesome human beings.

The old view of education was that we should prepare the new generation to face the tasks of life in the inherited mould of thought and conduct but the new view is to assimilate the past and the present by being forerunners of new pattern of thought and life. Therefore the need for good and great schools and good and great teachers can never be overemphasized. We have shining examples like Dr. S. Radhakrishnan who more than fulfilled the requirement of an ideal teacher. An ideal teacher is one who loves knowledge, loves his students and has intense love for his profession.

Swami Ranganathananda, a great monk of the Ramakrishna Order, aptly said, 'The private life of a teacher is of public importance'. In other words, a teacher is not a mercenary and cannot afford to have gaps between his private and professional lines. Nowhere in the world is a teacher worshiped and venerated as in India.

Schools provide for a conducive environment to work for cooperative achievement and therefore the role of teachers in schools or colleges is of paramount importance. Teachers would do well to expose their students to lives of outstanding moral stature like Buddha, Jesus, Gandhi and Vivekananda. The teachers would also do well to add to the moral fibre of their students by knitting into the educational programmes, community service, which will turn them into socially productive citizens. Teachers are truly nation builders.

Speaking on the quality of teachers at the Cambridge University, its President once remarked, 'Our teachers need no supervision'. This speaks volumes of their dedication, character, love and positive attitude. Teachers not only educate but also enlighten their students and in this perspective they are great transformers. I recall what the famous jurist Nani Phalkiwala once said, 'Enlightened citizens cannot be produced in the factory, it has to come through education'.

Nineteenth and twentieth centuries saw some important values before the mankind. Democratic values originated from England. Values like liberty, equality and fraternity emanated from France. Eternal values like non-violence and satyagraha came from India and value of scientific temper from the study of science. If we have to see a brighter future for our younger people, we need to impart these values in addition to our classroom teaching. Values like truth, non-violence, friendship can only be imparted by teachers only through face-to-face interaction with their students. Any amount of stored information in the form of books or internet cannot help inculcate such abiding values in our young people. Teachers alone have the powerful capacity of driving home human concepts. They alone can inspire learning. Teachers can be the best counselors – shaping attitudes and moulding characters. An ideal teacher is one who encourages questioning and never condemns his students. He is one who identifies the aptitude and grooms talents. He is best equipped to create original thinkers, of course, through introspection and contemplation.

India has always been respected for her knowledge. We are now heading towards 'knowledge economy' and India is forced to become a 'knowledge super power'. The best way that our teachers can raise to the occasion is to reduce the gap between theory and practice. We have world-class students but our schools and colleges lack world-class faculty. Let us all channel our efforts in producing best human beings who do not miss the joy of learning.

Let us all look forward to a day when "All over the world, children run to school and walk back home" and that would be an abiding tribute to the memory of Dr. Radhakrishnan whose birthday is rightly celebrated as Teachers' Day every year.

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Way to Spiritual Happiness

- Good health and economic security are a 'must' for peace of mind. But having both, many are still in the state of perpetual mental restlessness.
- The real man has three desires:
  1. Desire to live
  2. Desire to know
  3. Desire to happiness and bliss.
- Remove all hypocrisy. Hypocrisy is the sworn enemy of peace of mind.
- Do not criticize anybody or anything. Be aware of the words you use. It is a good rule to mind your own business to keep your peace.
- Holy Mother tells us, 'Do not find fault with others but find fault rather with yourself. Learn to make the whole world your own. No one is a stranger, my dear; the whole world is your own'. Curb the tendency to deplore others. Put yourself in the place of God. Feel your God. Feel that the entire universe is your creation.

- Shut your eyes to insults. Don't let others bring you down. Don't bring down others. Be humble before everybody. Be humble in every situation.
- Forget and forgive. Think well of everyone.
- Do not aspire for worldly glory, worldly recognition.
- Too many expectations lead to disappointment.
- Do not attach importance to public opinion. Find peace in challenges and blessings from tragedy.
- Attach importance to moral values, codes of conduct, scriptural teachings, opinion of saints and holy men.
- Never be jealous of others.
- Never blame others for your misfortune.
- Instead of trying to change the environment, change yourself for the better.
- Put up with things. Endure cheerfully.
- Become self-reliant.
- Do not avoid responsibilities.
- Swami Amartyananda in his book 'Effective Life Management' says: Culture of the inner life can be acquired by the following:
  1. Satsanga
  2. Discipline
  3. Meditation
- Always be doing something positive, something worthwhile.
- Motiveless service yields pure joy. Make others happy. You will begin to delight in their happiness.
- Introspection at every stage is necessary. Managing your thoughts - understanding the true nature of thoughts, controlling the quantity, quality and direction of thoughts. Watch the thought flow.

- Discriminate between present path and good path. Do what your heart knows is right.
- Do not multiply your wants and then feel like a beggar. Reduce your wants and feel like a king.
- When you are in utter despair, turn to works of great souls, take a leave for a month and go on pilgrimage, spend time in prayer, meditation, long walks. Enjoy being you.
- Inward richness is real richness.
- See God in all.
- Pray regularly.
- Believe utterly in the unreality of the world.

Gist of a Talk delivered by Dr. Wooday P. Krishna (1975-78 Batch) on 7 July 2012 at the Annual Retreat for Old Boys of Sri Ramakrikshna Vidyashala held at Sri Ramakrishna Institute of Moral & Spiritual Education, Mysuru

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Integrative Education

Knowledge has been given the pride of place in Indian culture. Bhartrihari, the famous Sanskrit poet, compares a man without knowledge to a beast. Our sages have declared that only that knowledge, which leads one to liberation is fit to be called as knowledge. The upanisads divide knowledge into two groups: 'Para Vidya' and 'Apara Vidya'. The knowledge which leads us to self realisation or higher knowledge is 'Para Vidya'. Secondary or lower knowledge like the arts and sciences is 'Apara Vidya'. We have from times immemorial, always given the place of importance to knowledge.

The main purpose of education is acquisition of knowledge. And as Bacon would have said it, 'Knowledge is power'. Man is not just the body. Nor is he the sense-organs and the mind. He is essentially the self, the master of all these. Therefore any education worth the name should help the students to manifest their potential self. It is now widely recognized that the system of education obtaining today is far from satisfactory. Examination-oriented training is forcing the students to

spend too much of their time and energy in memorizing other people's ideas and opinions rather than developing their own faculties for clear and original thinking. To make matters worse, this bookish education is making them psychologically averse to any kind of extra-curricular work. As regards the cultivation of moral and ethical values, less said the better. A strong misconception about the word secularism has practically prevented the imparting of moral and spiritual education in our schools and colleges. Though there has been a tremendous expansion in our schools and colleges. Though there has been a tremendous expansion in education; it has been only in quantity, critically at the cost of quality.

Swami Vivekananda said, 'The end of all education, all training, should be man-making. The end and aim of man-making is to make the man grow. The training by which the current and expression of will are brought under control and become fruitful is called education.' It is this magic word called education that creates all the difference between backwardness and all-round development of our nation. And swamiji adds, 'Education is the basic remedy for many of the ills the nation is suffering from; for with the education of the masses will come awakening and once the masses are awakened, India will rise.'

There is no dearth of ideas, values, and beliefs about education and these hardly have any significance for what goes on in and outside our schools and colleges in the name of education. One can clearly see this dichotomy between belief and practice. One often blames either the educator, the management or the government. Some feel that there is a general deterioration in the spirit of man, in his sense of devotion to duty and hence the sorry state of affairs. So efforts are made to inspire people to be more sincere about producing better results.

To my mind, integrative education seems to be the lasting remedy for all that is said to be wrong with our

present system of education. By integrative education, I do not mean a little book-learning, some music and art, some work-experience and vocational training, a little exposure to moral and spiritual values and so on. The most important thing to see is that the student is a living, moving, growing entity that defies all systems, ideologies beliefs and notions. Put briefly, education should prepare them for life. They should not only gain knowledge, put be adequately prepared inwardly to meet the challenges of life. When one makes life's purpose the purpose of education then one does not approach the student with any readymade theory or technique. One finds that learning takes place best in an atmosphere where there is freedom from fear of any kind.

The essence of integrative education is the establishment of a right atmosphere. And when there is this atmosphere, then carefully, tentatively through the processes of observation and self-knowledge, intelligence can be helped to grow. That intelligence is different from knowledge. That intelligence is the unifying factor in an integrative education. The school's business therefore, is the creation of an environment where intelligence can flower for with it will flower truth, beauty and goodness.

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Who Are You Inside?

He has an aptitude for music. He has an aptitude for machines. She has a fascination for medicine. When a student discovers his/her natural aptitude. He/she feels good and has the inner strength to build a career around that aptitude.

We have some of the most exciting students on our campuses. The truth is most of them are an enigma. Why? Neither they nor the institutions they are part of, have uncovered their latent aptitude/s. That is why you have an engineer who discovers in his thirties that he ought to have been a musician. And we have seen doctors, who have gone on to become administrators and become stars in civil services. Why does this happen? This happens because the system does not enable the young person blossom by a journey of self-exploration, early on.

Youngsters chase goals that have social sanction and dignity. Consequently, in the earlier decades, we had the brightest people in either engineering or medicine. One

suspects, it still is that way, although several self-believing children have sought commerce and law as well.

When an individual is pursuing a task for which he/she has an aptitude, it will soon become a passion. And when you work with passion, the results are always spectacular. As educationists, our mission should be to create a global society, in which every individual is pursuing challenges that they have a passion for.

The environment needs people like the Ranchchod das of the '3 idiots' fame, who could persuade a certain Farhan to give up a fancy engineering degree to pursue his passion for animal photography in the Amazon forests.

Seriously, several bright stars have gone astray, simply because their passion lies elsewhere. They could have got this right earlier. If only, they had a rational assessment, of their aptitude.

Today, as administrators, can we say that we have made an effort to ascertain the aptitude of each of our students? This should be possible, through a well-designed student-mentor relationship framework. The student needs a fair assessment of his/her strengths, based on which advice can be provided regarding suitability to different professional streams.

So, wish we have aptitude tests that are able to portray the complete picture of a person's personality and the core traits. Because it is easy to excel in ares that you have a linking for.

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Integrated PU courses burden parents and students

If you are an anxious parent trying to guide your child into one of the top colleges, chances are that you would have heard of this hybrid 'Integrated PU Colleges', the Central Board of Secondary Education (CBSE) has issued a circular directing principals across the country to stop offering integrated coaching programmes with regular syllabus.

Most of these integrated PU colleges follow a fixed pattern of origin: they start out as private coaching institutes, offering tutions to help students prepare for competitive exams, and once they estiblish a popular name for themselves, they open establishments that focus entirely on preparing for these exams sandwiched with the regular PU curriculum. These integrated outfits are the equivalent of ticket counters at movie theatres- once you get the admission, you're sure to find your in way surely, this cannot be construed as a crime. But those seeking to be placed in prestigious colleges, might be paying a much higher price than we think.

To begin with, it might be more appropriate to first consider what we are putting ourselves and our children through when we enroll them in such outfits. Integrated courses are expensive. Most private educational institutions are well aware of the fact that many parents are willing to spend any amount to see their children through, so they charge according to demand. Once enrolled, most students find themselves in a rat race ad infionitum, with mock test once in every week that concentrate entirely on core subjects. Other subject's like languages are touched upon just as much as required of the exam and pratical lab sessions are restricted to about 2 to 4 months of each acedamic year. The regular syllabus is completed in less than half the year to allow students to concentrate on their competitive exams. There is little or no encouragement at these institutes to pursue any extra-curricular activities.

Flawed philosophy

There are a number of things that I feel are misplaced with institutes offering integrated programmes described above, but the one that disturbs me the most is the flawed philosophy enforced at these institutes. I firmly believe that to be successful outside the walls of our colleges, one has to embrace the well-rounded approach to learning. It is just as important to be creative as it is to be technical. The arts, the languages and the humanities play equally significant roles in our lives as do engineering and medical.

Regular PU colleges have a lighter, more balanced curriculum that allows plenty of time and space for the minds of students to meander from one subject to another. Its aim is to provide a base for students- a spring from which they can decide for themselves after careful consideration, what field of study to drive into. Intregrated courses, on the other hand, are like launch pads for rockets- they only point in one direction. Most of them are students they are funneled into these institutes

either by the education system or by the parents before they are old enough to realize what their passion is. Are we not depriving a chance for our children to listen to their heart? Despite the high success rates from these integrated institutes, a large number of students will never make it to the premier colleges, and will end up losing two of the most formative years of their lives, solving questions from previous years' papers.

There are two important questions to be addressed here. First, are the authorities right in giving licence to this integrated PU colleges? Second, why do parents fall prey to such schemes even though all they really want are bright and shiny further for their children?

These integrated institutes should present themselves as after class-hours private tutoring for specific competitive exams, for that is precisely the reason why people enroll themselves here in the first place. Moreover, this tutoring should always be over above the existing curriculum, and not a skewed substitute, so that only those who are targeting these exams would be willing to go the extra mile and enroll themselves. While we could blame private institutions and the media for fueling the hype surrounding our premier engineering and medical colleges, a significant part of that blame also falls onto parents, and teachers around the country, who view these hybrid integrated courses as the only pathway to a successful career.

Mediocre Results:

Compared to international standards, despite the high quality of students that enter these institutions, the amount of original research carried out at our top colleges is abysmally low. Both students and professors view the system as a platform for recruitment into the corporate world, sooner or later. Most of these engineers held up switching streams or pursuing higher studies abroad to fulfill their ambitions, while genuinely interested students are deprived of their branch and

institution of choice. The result of this is that we are creating mediocre engineers when we could be creating great scientists, actors, journalists, writers, musicians and sports persons.

As long as colleges use separate competitive exams (often of their own choosing) as part of their criteria for admission, there will always be an unquenchable demand for coaching institutes and their ilk who will try to take advantage of the system. One solution would be for colleges to use examinations scores as only one out of several factors that will be considered for admission. Aspiring students should also be given admission based on their excellence in sports, their participation in real-life projects, extra-curricular activities or interships that they may have taken up during their holidays.

The key point here is balance. On one side, we do want some institutions, whether public are private, that set unimaginably high standard in their respective fields- and in a country like ours where the number of students for outnumber the number of such institutes, the competition will invariably create the need for additional preparation and tutoring.

On the other side however we also need a system that fosters freedom and creative thinking, allowing children to choose their own parts and create their own lives, so that those actually desire to be at these cutting-edge technical institutes actually do so on their own.

(Deccan Herald - May 1st 2014)

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Learning while earning

Engineers play a crucial role in nation building and the expertise they acquire in their specific branch has much to do with the quality of education they get.

The Institution of Engineers- India (IEI), set up in 1920 and the largest professional body of engineers in the country with a total membership of about seven lakh, plays a crucial role here.

IEI, which has over 500 student chapters in recognised engineering colleges and over 300 student chapters in polytechnics, is the first professional body to start a non-formal engineering education programme in the country. It conducts bi-annual examinations, popularly known as AMIE examinations The examination was introduced in August, 1928.

Rules and syllabi were drawn as far back as in 1924 and have been revised from time to time to keep pace with the technological developments. AMIE graduates have occupied top positions at State, national and international levels and have contributed immensely to the engineering field over the years.

Salient features

- Open admission system.
- English is the medium of examination.
- Students can appear externally at the examination. No routine college schedule and attendance.
- Learning while earning.
- Affordable cost of engineering education.
- Freedom to select branch of engineering.
- Equivalent to degree in engineering. Hence access for admission to post-graduate programmes such as M.E., M.S., M.Tech., M.B.A., etc.
- Participation in conferences and seminars at concessional rates.
- Campus interviews are organised for AMIE graduates during the annual convocation organised by IEI.
- Course material is not provided.
- Classes are not conducted.
- AMIE graduates are eligible to apply for corporate membership of IEI and practice as Chartered Engineers.
- For a complete pass in Section A or in Section B, Grade Point Average (GPA) shall be 6 which means a person should score between 50 and 59 out of 100.

Scheme of examination

There are two schemes: Section A (Non-Diploma) / Section A (Diploma) and Section B.

Eligibility for Section A (Non-Diploma)

The candidate is required to enrol as technician member of IEI. He should have attained 17 years of age and passed 10+2 exam with minimum 45 percent marks in aggregate as well as 45 percent marks in Physics, Chemistry and Mathematics and pass in English.

Exams are held in June and December every year. It consists of a total of 10 subjects- two subjects of Basic Sciences, five of Engineering Sciences, two of Communication and one subject of Social Science.

A student is permitted to appear in any four subjects out of 10 in one examination.

Eligibility for Section A (Diploma)

The candidate is required to enroll as senior technician member of IEI. He should have attained the age of 18 years and passed Diploma in Engineering from any State Board Of Technical Education. The exam is held in June and December every year. It consists of four subjects- two of Engineering Sciences, one of Communication Science and one of Social Science. A student is eligible to appear in all four subjects in one examination.

Eligibility for Section B

After passing Section A (Non-Diploma) or Section A (Diploma) examination, a candidate is permitted to sit for Section B examination in any one engineering division of his choice. At present, exams are being conducted in the following 10 divisions: Chemical, Civil, Computer, Electrical, Electronics, Mechanical, Materials and Metallurgical, Mining, Production and Textile.

Exams are conducted in over 65 centres across the country. On passing any five subjects of Section B, a student is permitted to do project work on a subject under the designated project guide and is allowed to do laboratory experiments in an engineering college close to his place. Candidates are given six years each to pass Section A and Section B examinations.

Recognition

Passing Section A and B Examinations of IEI is approved by the Ministry of Human Resource Development as equivalent to a degree in appropriate field of engineering.

Fee structure

The tentative fee for completing AMIE examination is around Rs. 20,000 including fee for laboratory experiments and project work evaluation.

IEI is a statutory professional body of engineers which has over 100 State and local centres in India and five centres abroad with its headquarters in Kolkata. It was granted a Royal Charter by the then British Government in 1935 which is equivalent to an Act of Parliament. Anyone who wishes to practice as a Chartered Engineer must register oneself with the institution as its corporate member.

The Royal Charter bestows the statutory authority with the responsibilities for promotion of science, practice and business of engineering in all disciplines, education and certifying competency of engineers. IEI has been serving the nation as a qualifying body and learned society for the past 93 years.

IEI has recognised the following 15 divisions: Aerospace, Agricultural, Architectural, Chemical, Civil, Computer, Electrical, Electronics And Communications, Environmental, Marine, Mechanical, Materials and Metallurgical, Mining, Production and Textile.

Annual national conventions of each division are held throughout the country and journals containing research papers and practice-oriented papers are published for the benefit of engineers. The Indian Engineering Congress is held every year in which engineers from all parts of the country actively participate.

The author is a practising chartered engineer and Chairman, The Institution of Engineers (India), Karnataka State

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Technology supplements commerce courses too

BANGALORE: Animated movies to explain concepts; games and activities to make learning more interactive, digital assessments... commerce classrooms in some colleges are going hi-tech to supplement classrom learning. The Seshadripuram Group of Institutions has implemented this method in most of its institutions, while Jain University is proposed to implementing it next year.

Wooday P Krishna, Honorary Secretary of the Seshadripuram Educational Trust, said, "Technology was earlier being applied in Science and Engineering courses, but is now being extended to Commerce. It has proven helpful to students as they are tech savvy and used to gadgets. Minimum information is used to drive home concepts so students can learn them easily."

Sripal Jain, founder director of K2 learning, whose technology is being used by the Seshadripuram Group, said the concept is applicable to smartphones, computers, tablets or any device where internet can be

accessed. "Students are given a login and password and they can choose from six different formats in which they can learn," he said.

Through not mandatory, it costs Rs. 1,500 to Rs. 2,500 per student per year for all subjects put together. While students in I and II PU Commerce Courses, Chartered Accountancy and Company Secretaries Foundation Courses are already using such technology, B.Com. and B.B.M. courses will be covered soon.

WHERE IS IT BEING USED?

- I and II PU Commerce courses courses
- CA- Common Proficiency Test (cpt)
- Company Secretaries Foundation Courses

Six formats:

- Animated movie
- Video lecture
- Digital content games and activities
- E-book
- assessments

Only supplementary

Mr. Krishna added, "The education system and teachers are not geared up for this yet. But a good teacher cannot be replaced as face-to –face interaction is necessary. Technology can only be an aid."

Chenraj Roychand, President, Jain university trust, which is also planning to implement the technology for its students from the next Academic Year, said it will be used after classroom talk to supplement what was taught as the attention span of students within a classroom is short.

"We have to see the pros and cons as it is an emerging concept. It should not make students lose interest in the classroom," he said.

K.C. DEEPIKA, THE HINDU TUESDAY, JULY 8, 2014

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SET
to scale new heights

Seshadripuram Educational Trust (SET, one of the oldest educational managements in the country, is continuing its educational legacy by providing and creating good individuals

Seshadripuram Educational Trust was the fulfillment of the dream and effort of two female educational enthusiasts of Seshadripuram – Anandamma and Seethamma. Shadripuram Group of Institutions, established in 1890, initially was a primary school with about 20 children in two rooms in Mangalore.

Today, Seshadripuram Educational Trust, situated in Seshadripuram, Bengaluru, stands as a Global Educational Institutions.

SET has 26 institutions ranging from kindergarten to Ph.D courses. It comprises 7 schools, 6 degree colleges, one college and 6 other independent institutes. The trust employs over 1,200 people and educates over 20,000 students.

Rooted tradition, the vision of SET is to keep pace with changing trends in the educational scenario, facing new challenges as well as setting and meeting higher benchmarks. Dr Wooday P Krishna, General Secretary of Seshadripuram Educational Trust, says, 'We try to inculcate ethics in our students at a very young age. We should not tell our young generation to be money-earning machines, instead, we should bring them up as good human beings. Orginally, education and health were considered as a charitable task, but now it has become a commercial task."

Holistic Development

With an inspiring ambiance for learning, Seshadripuram college committed to the highest standards of academic excellence and value-based education. Focusing on the holistic development of the students, SET gives emphasis on classroom interactions, co-curricular/extracurricular activities, sports, social service, as well as humanitarian initiatives like Bharat Seva Dal, Gandhi Study Centre, Bharat Scouts and Guides, Youth Red Cross, NSS and NCC.

The trust, which has experienced and highly qualified faculty, encourages teachers to present papers at national and international seminars. Importance is given to research work.

According to Dr. Krishna, "The main problem that a majority of institutions face is dearth of qualified teachers. Most institutes have good infrastructure but lack good faculty. The number of trained personnel opting for teaching is less. We should be very keen in hiring teachers. Senior people having good industry exposure should be brought in as faculty.

Global Reach

SET's colleges recognised as centres of excellence in education and research, are now on the global education map. Expanding its activities overseas, SET and its institutions have initiated student and faculty exchange programmes

Here are some suggestions from Dr. Wooday P. Krishna:

- Combine management education with adequate industry exposure
- The curriculums of MBA should be designed based on the needs of industry.
- MBA programme should not be an extension of undergraduate programme.
- We need to take a holistic approach to teaching and learning process in MBA programme
- 50% of the faculty should be drawn from industry.

There is a steady exchange of students and faculties with Grimsby institution in the UK, University of Chester in the UK, University of Central Oklahoma in the US, and Oklahoma State University in the US, students from many countries, especially the African and South Asian countries, find SET colleges congenial to pursue their higher education.

"We have global MBA programme, and recently, 30 students left for the US. During their MBA programmes, students study six months here and one and a half years in the US. The degree is awarded by them. We have been successfully running this programme for the last 20 years," says Dr. Krishna.

Offering courses in Science, Arts, Humanities, Social Science, Commerce and Management, the group of institutions is at par with the recent development in Life Sciences, Information Technology and Computing - Biotechnology and Genetics, and Computer Science. "As there is rapid change in the management scenario," continues Dr Krishna, "The syllabi needs to be revamped every two years, and 50% of our MBA programme should be practical oriented. I would like our students to spend more time in industry than in the classroom. We should not copy the Western model of education; instead, we should try to develop the Indian style of management of drawing inspiration from our cultural ethos."

Aiming higher with plans to get the institution autonomous status and then gradually upgrade the institution as a university, SET is all set to redefine the present education system in the country.

Shalet James (EDUCATION INSIDER, JANUARY 2014)

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Critical Study of Institute - Industry-Interaction for Better Governance of EEIs*

Dr. Wooday P. Krishna, *et al.*

Introduction

Investment in education leads to the creation of human capital, which is an important input into socioeconomic development of a nation. In many developing countries, including India, education in general, and higher education in particular, is predominantly in the public sector, though the trend is fast changing. Developed countries, on the other hand, have been able to have market-complementary arrangements in education as a result of which widespread literacy levels have been achieved.

The new economic order and globalisation of the market place in the Indian context has opened floodgates for the multinational and international companies to participate in the Indian economic activity. This has led to a greater demand in technical education system in

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Co-authors :

Dr. P. Vijayakumar and Dr. P. Aravindan

* This article was published in MT & M Journal, Jan-Mar 2005

general and higher engineering education in particular to provide highly skilled technical manpower, which is not only knowledgeable but also competent enough to understand the complexity of contemporary scenario. Today, India is the third largest higher education system in the world (after China and the USA) in terms of enrolment. However, in terms of the number of institutions, India is the largest higher education system in the world with 17973 institutions (348 universities and 17625 colleges). This means that the average number of students per educational institution in India is also lower than that in the US and China. A recent McKinsey-NASSCOM study has shown that the total addressable global offshoring market is approximately US$ 300 billion, of which US$ 110 billion will be offshored by 2010. India has the potential to capture about 50% of this market and in the process generate direct employment for about 2.3 million people and indirect employment for about 6.5 million people. However, high quality manpower would be required for such jobs.

Background

Presently there are very few technical institutions, which provide quality technical education, whereas in many others, the quality of education is a matter of more serious concern. While the demand and supply situation of engineering graduates is satisfactory in terms of quantity, today's young generation has to cope with indifferent quality of education in a large number of institutions. It is one of the contributory factors for many students seeking education outside the country. The policy framework governing higher technical education at the Central and State Government level appears to be so gray that a conflict is generally perceived between student aspirations, Governmental priorities and institutional goals. This situation affects the objectives of good education.

At this juncture, shaping engineering education for the future has become highly complex and unless it is taken scientifically, they will not be able to cater to the needs of the future industrial activity successfully. The technical education must thoroughly understand the rapid changes that face the industrial world and must adapt their curricula to produce graduates that have the basic technical skills based on the need of the hour to succeed in a highly competitive environment through effective Institute-Industry-Interaction. Graduates must understand what is expected of them by employers that consider every hiring decision very carefully in an era of shrinking financial and personal resources. University or Engineering Educational Institutions' (EEIs) programmes facing the same downsizing pressures, as many industries must be creative in understanding what motivates industry and what technical and business skills industry requires of their employees. EEIs must also carefully consider how to invest their limited resources to produce the graduates through different channels like University system / classroom situation or reaching larger cross-section through Internet, using modern technology and connectivity.

Need of the Hour

There is a great need to revamp technical education at all levels for meeting the challenges of technology development in industry and other work places. There are education and training needs for the new industries and modernization of existing ones. Technical human resources are thus required to have relevant training and master the use of new technologies. Better interaction between Technical institutions and industry is the need of the hour. This will have great bearing on the Engineering Curriculum, exposure of industrial atmosphere to engineering students and subsequent placement of young graduating engineers in industries across the country. With the advent of globalization and opening up of Indian economy to outside world,

competition among industries has become stiff. To solve their engineering problems they look up now to EEIs. Similarly, there is an urgent need to prepare engineering students for jobs in multinational companies, by exposing them to newer technologies and engineering methodologies. These objectives can only be achieved well by bridging the gap between industry and the academic institutes.

Problem Definition

The primary focus of the present study is to assess the existing governance of EEIs in dissemination of engineering knowledge, technology transfer and the innovation process. Three main dimensions of the relationship with industry are also examined: collaboration through research and consultancy; commercialization of their (Engineering College) research; and linkages made in the context of teaching and training.

Research Methodology

The findings are based on the questionnaire survey and interview conducted by the Author during the course of this research.

The principal objectives of the study are to understand the

i) effectiveness of existing governance and management of EEIs and how to ensure better governance at these EEIs.

ii) a comprehensive picture of direct and indirect interactions between EEIs and industry;

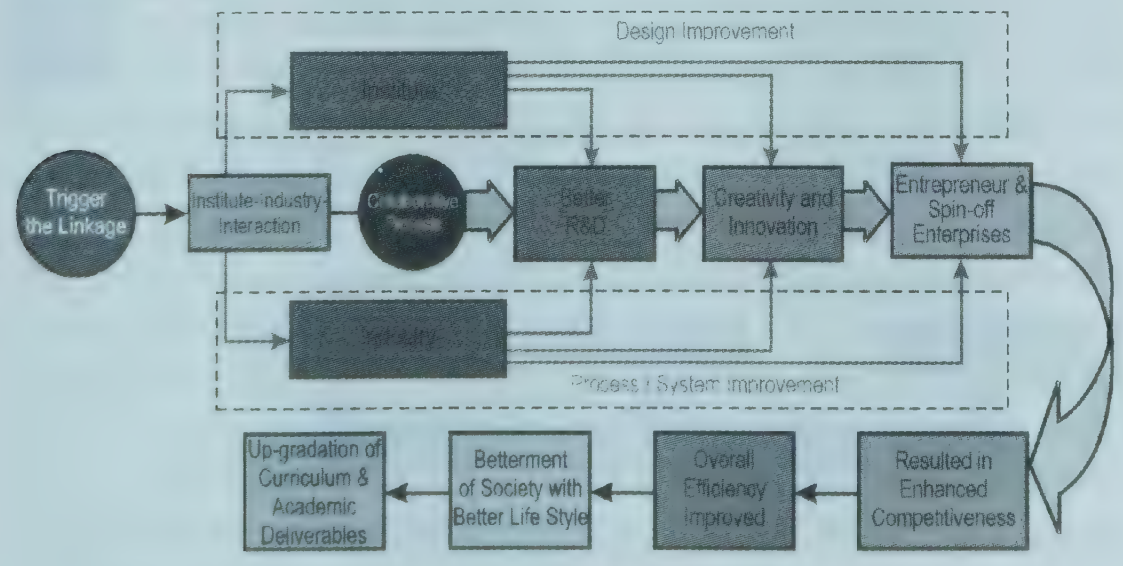
iii) information enabling the EEIs to benchmark their individual activities in this area and how to enhance the competitiveness of EEIs.

Hence, here an attempt has been made successfully to study the existing reality of Institute-Industry-Collaboration activities at various EEIs in Bangalore,

Karnataka with a holistic approach. This study revealed the necessity of enhancing the competitiveness of EEIs through an integrated approach. The various parameters influencing the Institute-Industry-Collaboration are systematically studied. By applying the tools and techniques of TQM, the problem was formulated and resulted in the scientific-logical evolution of the questionnaire. Then it was validated after conducting pilot study followed by in-depth interviews and culminated in field study.

Findings

Academic-Industry linkages resulted arguably from four main mechanisms and sources. Firstly, through informal contacts and spinouts from university / EEI departments; Secondly, from contract and collaborative research performed by universities / EEIs on behalf of industry; Thirdly, as a result of property-led initiatives in the form of science parks; and Fourthly, via the commercial exploitation of university research through the management and licensing of intellectual property rights (IPR) (Alexander, 2000). However, Better Governance and Better-Institute-Industry Collaboration leads to the betterment of society as shown in Figure below .

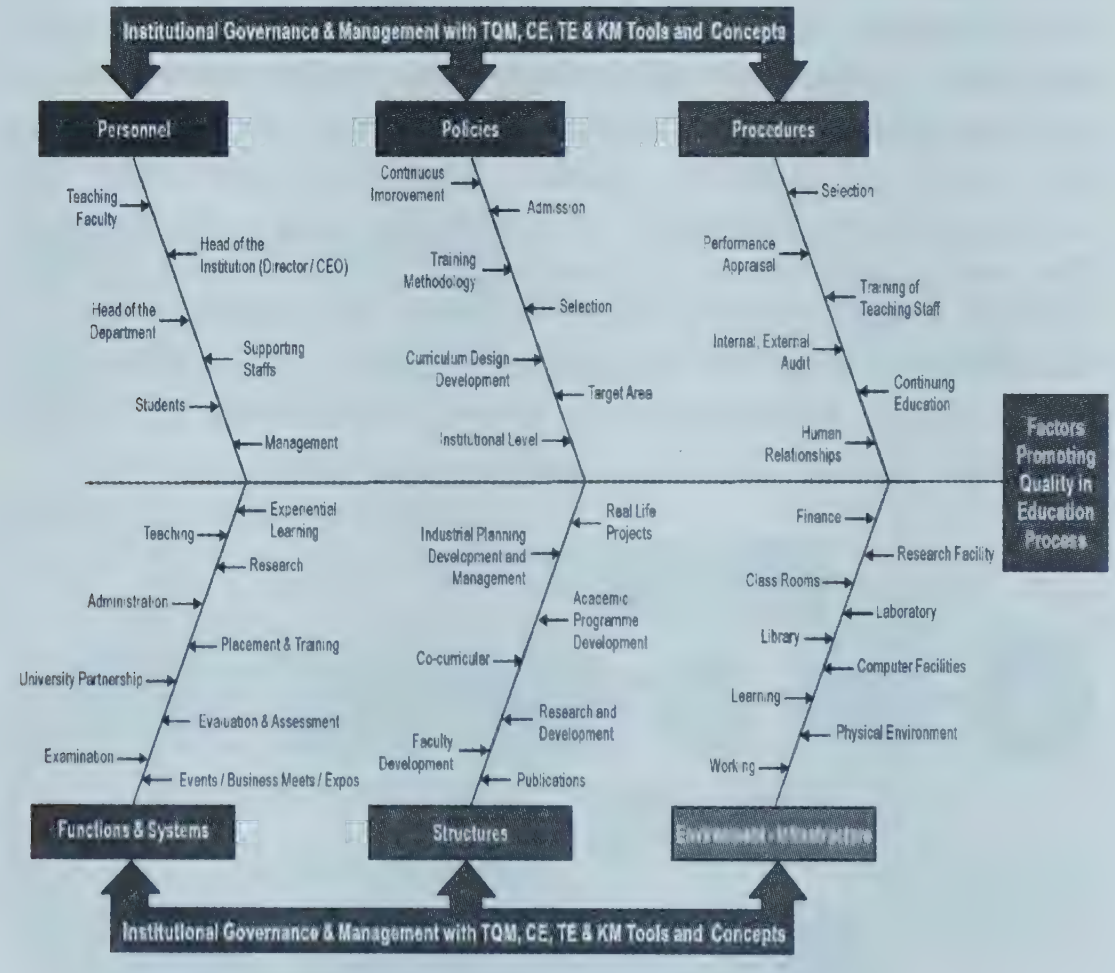


Institutional Transformation for Excellence in Corporate Education©

(Ref : Dr K. Gopalakrishnan, 2000)

Factors affecting Educational Process Quality

The various factors promoting quality and excellence in engineering education are represented by Ishikawa Diagram (Fish-bone Diagram) shown in Figure below. Healthy Institute-Industry-Interaction will automatically strengthen the initiatives and the implementation process of TQM in any EEI. It will have positive impact of successful implementation. Simultaneously, TQM implementation creates a systems approach with process centered cross-functional team to ensure better institute-industry-interaction at the EEI.

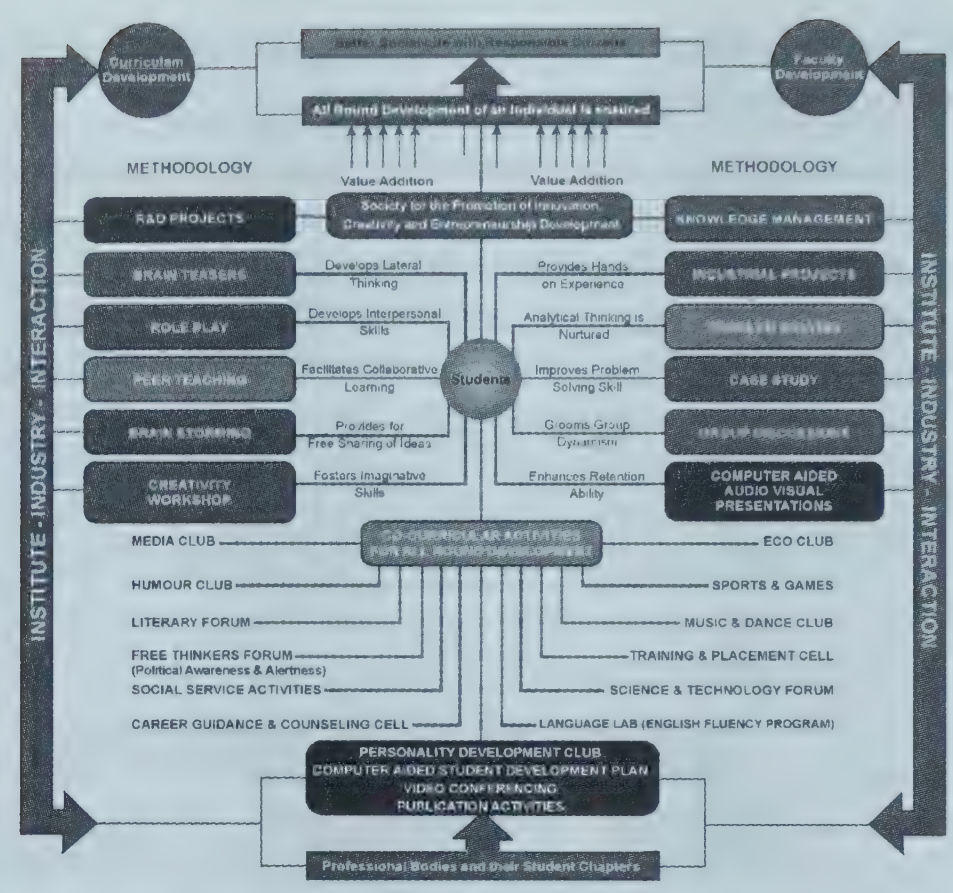


Various Factors Promoting Quality in Education Process©

(Ref. : Dr. K. Gopalakrishnan, 2000)

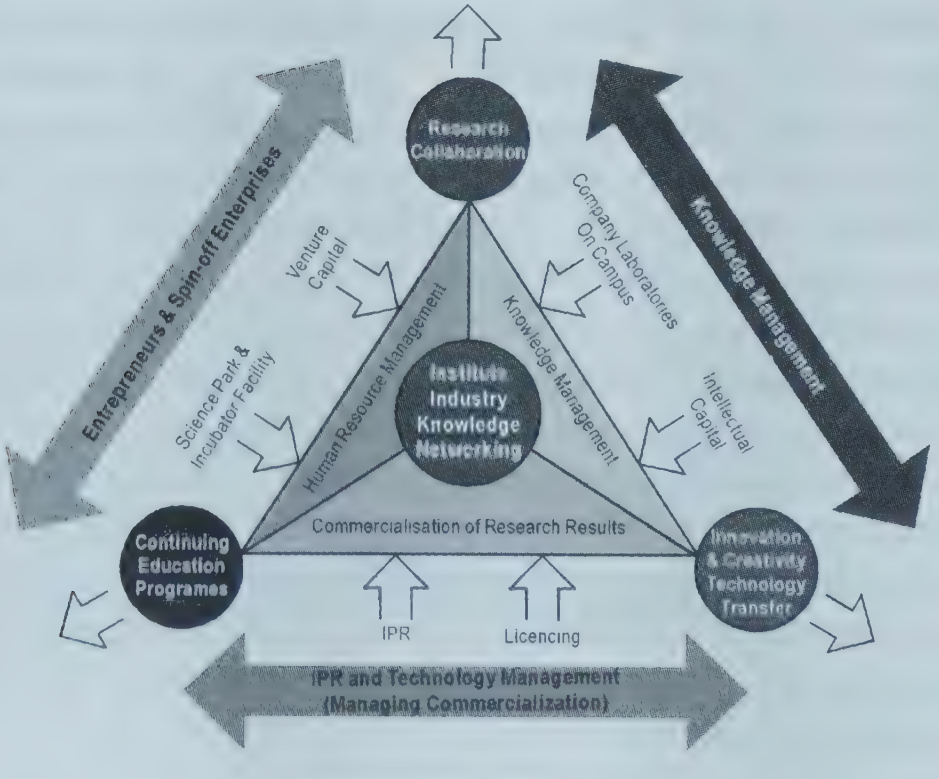
Integrated Process Approach to Educational Competitiveness

Education is a lifelong process. Professional Education in general and Engineering Education in particular also be approached as a process using the concepts of systems approach as shown in Figure below. The various other means to enhance the competitiveness through the integrated process approach adopting the concepts of concurrent engineering, knowledge management and team engineering has been considered to evolve suitable model. Intellectual alertness, creativity and talent for innovation go into the making of an engineering and technology leader today and continue to be essential for professional competence tomorrow. The candidates selected for admission can use the most modern equipments, laboratory and other facilities available at various R&D establishments and industries through effective institute-industry-interaction and go through the specialized courses designed to meet the challenges of the present and future. The teaching methods rely on direct personnel contact between the faculty and the students. Studying in such an environment with people having similar goals and aspirations is an exciting experience during one's academic life and is of considerable value in one's professional career. Versatile co-curricular activities to ensure the overall development of an individual with epistemological understanding and mental alertness are an important aspect of Educational Process. Society for the Promotion of Innovation, Creativity and Entrepreneurship (SPICE) will help the learning process by kindling the lateral thinking of the students. Faculty shall be trained through various faculty improvement programmes to understand the learning disability among the students.



Process Approach Learning Model© for Overall Development of Students

(Ref : Dr. K. Gopalakrishnan, 2000)



Competitiveness Model of IIC©

(Ref. : Dr. K. Gopalakrishnan, 2000)

The major factors to be considered for better governance of EEIs are as follows;

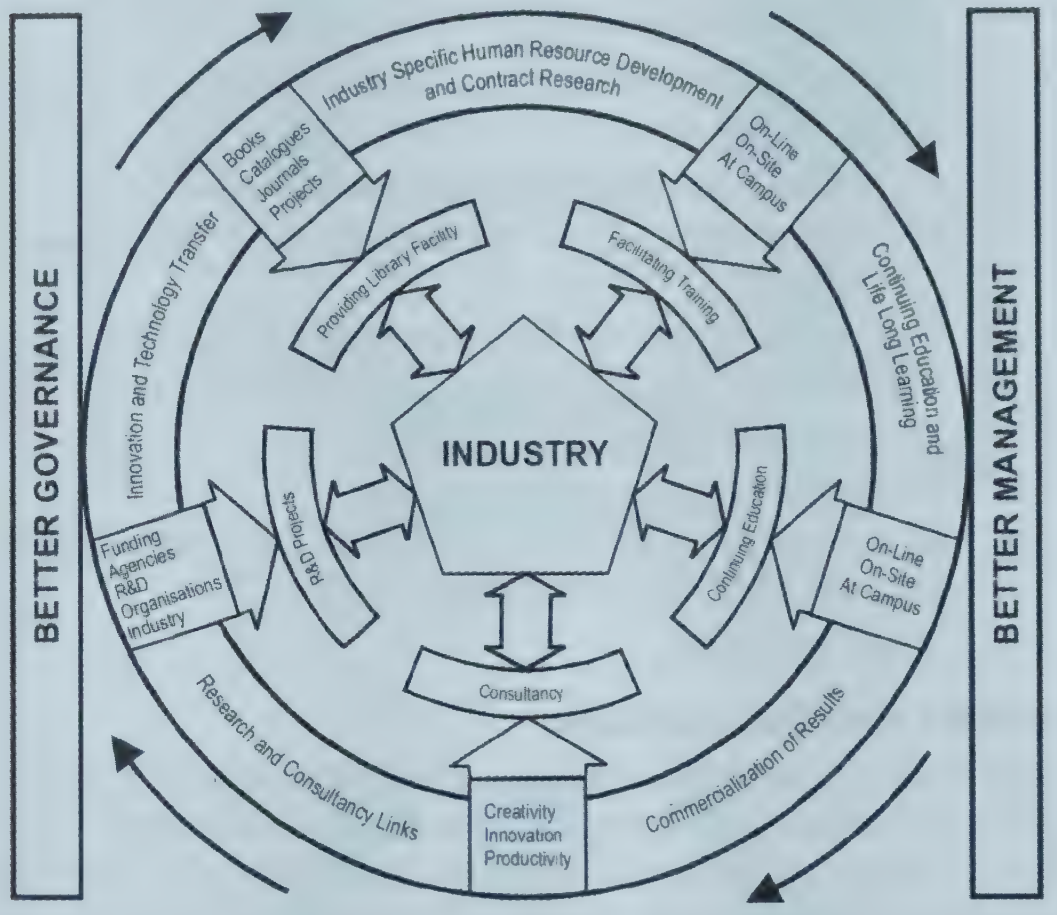
1. Professional Ethics and value system of the promoting agency (Society or Trust)
2. Quality, Accreditation and Global Competitiveness
3. Administration and Management Structure / Empowerment
4. Faculty: Qualification, Competency and Numbers
5. Students Admission Policy: Intake Quality
6. PG Education and Research and Placement Activities
7. Use of Education Technologies / Institutional Methods / Continuous Monitoring of Educational Process.
8. Institute-Industry-Interaction
9. In-house Events and Initiatives for Publications and Co-curricular Activities
10. E-governance.

Results and Discussions

The results and discussions are systematically throw light on, "What Institute can do for the Industry" and "What Industry can do for the Institute" by having healthy collaborations leading to material benefits for both the sides. The radar diagrams to assess the Competitiveness of Institute-Industry-Collaboration activities of Self Financing Institutions (2002-2006) and Government / Government Aided Institutions (2002-2006) are found to be very useful.

The pentagon model of Institute-Industry-Collaboration developed by the author during this course of study can be implemented successfully in any EEI. The Integrated Process Approach (IPA) incorporating the tools and techniques of TQM, Concurrent Engineering, Team Engineering was found

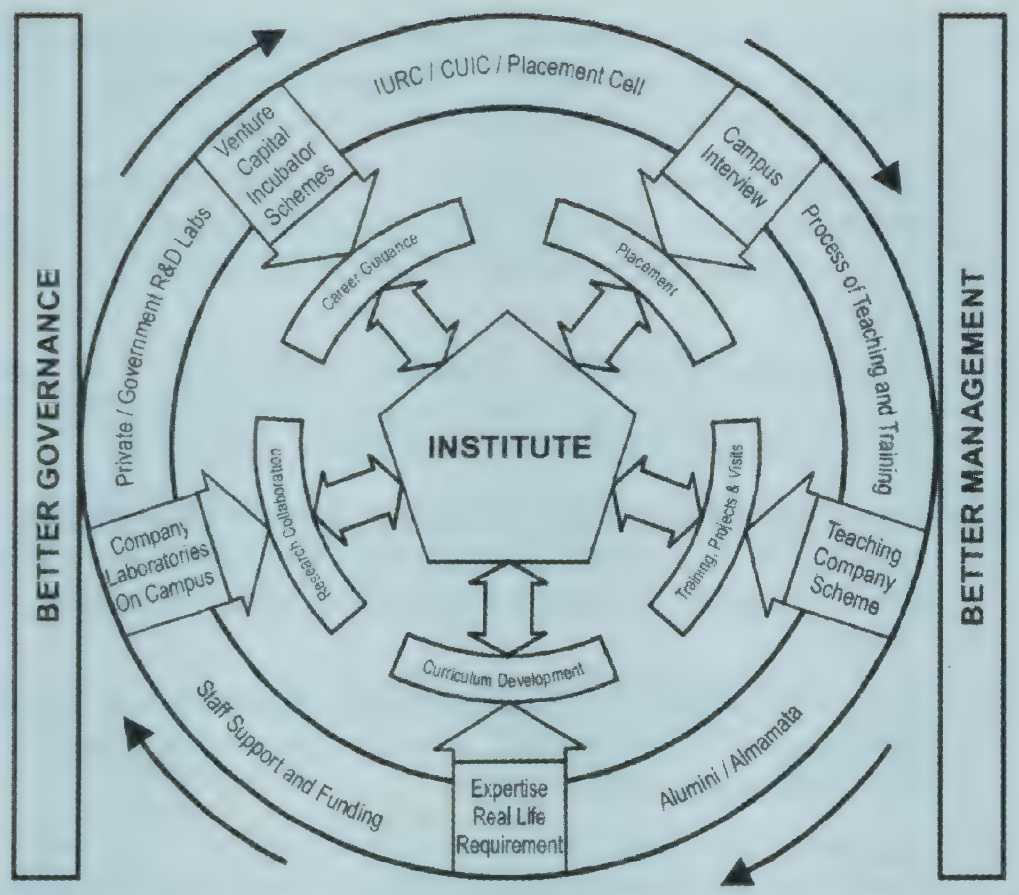
to be an effective tool. With systems approach to the educational process at EEIs using this IPA tool, by having effective Institute-Industry-Collaboration activities, the better governance of EEI can be possible and by this way the educational competitiveness can be enhanced.



Pentagon Model for "What Institute can do for Industry"

Conclusion

The attitude and professional ethics are the basis of value system of promoting agency of any EEIs. Quality Policy of the governing body of any EEI and its keenness to implement TQM in line with NBA / NAAC procedures will decide the level of quality initiatives. Creating suitable administrative structure and governance with proper adequate empowerment at all levels of management is based on the attitude and professional ethics of the promoters of EEIs.



Pentagon Model for "What Industry can do for Institute"

With reference to the qualification and number of faculty members will be based on the AICTE / UGC norms / Affiliating University's norms. Similarly, the admission policy and eligibility criteria are based on the Government Policy / AICTE / UGC / Affiliating University's norms. The real focus for better governance can focus on the Institute-Industry-Interaction research and development, placement activities apart from better teaching - learning environment.

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India's First Simulator Ride ON WHEELS Built on Multi-purpose Expandable Auditorium

Dr. Wooday P. Krishna, *et al.*

Introduction to "Expandable Auditorium On Wheels with 7DPlus Simulator"

Normally the 4D/5D/6D Theaters or 3D Simulator Rides/Video Rides are the best examples to showcase/promote the interplay of various Science & Technology to create Virtual Reality/Immersive Experience and make the audience to understand complex theories, basics and principles with the help of stereoscopic 3D images (also called "intelligent imaging system") along with simulation of seat movements in virtual environment and also to educate them in an interesting way with their proactive involvement. It is a New Age Edufotainment (Education, Information & Entertainment) initiative and contemporary way of cultivating interest for learning science & technology among school kids in a lucid way. These kinds of theatres are available at Disneyland (Parris, Hong Kong,

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Co-authors :

Dr. K. Gopalakrishnan and Dr. L. V. Muralikrishna Reddy

Los Angeles etc), Sentosa Island (Singapore), Various World-class Science Centres/Museums/Exploriums, few Amusement Parks and Malls in India. The 7DPlus Video Simulator Rides (Theatres) or Stereoscopic 3D or 7D+ Simulator Rides integrated by us can be installed either on Permanent/semi-Permanent Model or On Wheels at Science Centres/Museums, Schools/ Academic Institutions/ Professional Institutions or "On Wheels" has been the superior integrated system than all these experiences in India and Abroad and also designed/integrated by us in such way to provide better experience, feeling, sense of satisfaction and higher value for money to every stake holder. It is ideal solutions for various cities including Tier II or Tier III cities where Science Centres/ Museums are yet to come, on mutually agreeable models.

The 7D Attraction typically is situated in a mall or a theme park in a fully enclosed location measuring at least 600 to 1200 sq ft for 16-24 Seats. The site will house the auditorium, the control room and pre-show waiting area for visitors. The complete 7D Attraction system consists of (i) Motion seats and Special Effects (SFX), (ii) Projection or Video equipment, (iii) Audio equipment, (iv) Motion controllers and drivers, (v) Hardware/Software to co-ordinate the synchroni zations. The entire visual pleasure is built on "Stereoscopic 3D Technology" or S3D. The same system has been integrated in such a way at lowest possible cost because of its innovative state of the art technological superiority "On Wheels" which has been patented (International Patent Filed at Russian Federation-ROSPATENT) by us. National Design and Research Forum, The Institution of Engineers (India) is constantly encouraging such inter-disciplinary researches and supporting the International Patent filing process.

The technique of creating or enhancing or enriching the illusion of depth in an image or a video footage by presenting two offset images or video footages separately

to the left and right eye of the viewer is called "stereoscopy" (also called stereoscopic vision or 3D imaging or stereo 3D or S3D). The set of these 2D (x & y axis) offset images/visuals are then combined or processed in the brain instantly to give the perception of 3D depth or z axis. This can be accomplished in the following three ways:

1. The viewers wear eyeglasses to combine separate images from two offset sources
2. The viewers wear eyeglasses to filter offset images from a single source separated to each eye
3. The light source split the images directionally into the viewer's eyes (no glasses required to view which is also known as Auto stereoscopy)

Concept:

To showcase/promote the interplay of various Science & Technology (also to understand the need for inter-disciplinary or multi-disciplinary approach) to create Virtual Reality/Immersive Experience and inculcate the interest for Science, we wish to establish Network of 4D or 5D or 7DPlus Theatres/Fun Corners at Science Centres, Museums, Schools/Tourist Places/ Academic Institutions and/or On Wheels either with the support of Government or Public-Private Partnerships or Sponsorship from Corporate world as CSR initiative. Within 3 Years, we can explore the opportunities by establishing at least 15-25 such facilities across the country to benefit the School Children either on Permanent/semi-Permanent or On Wheels at Science Centres, Museums, Schools/Tourist Places/Academic Institutions etc.

Major Components of a 7DPlus Video Simulator Rides (Theatres) or Stereoscopic 3D or 7D+ Simulator Rides

The 7D Attraction brings together an immersive real life experience on-screen and sensational seat

simulation coupled with special effects that are bound to enthrall our visitors. Historically, 7D Attractions have been thought of as a fringe benefit added to numerous other entertainment options in a Science Centres/ Museums or mall or a theme park, but this idea is rapidly changing and making way for a truly world class learning centre or edufotainment experience to educate science/technology to contemporary school kids in a lucid way.

The technology that goes into the making of a 7D Attraction is truly world class as it combines the best in the business of audio-visual equipment including extreme performance control systems and high-end simulation. The 7D Attraction adds a layer of immersive fun for our visitors by treating them to experience the world of not only audio-visual but also other sensory effects such as Touch (Ticklers), Smell (Aroma), Movement of Seats, Combination of Rain, Wind, Snow, Bubble, and Lightening Effects. All the seat effects and theater effects are built-on either Permanent/semi-Permanent Model or as Mobile Auditorium/Theater on Wheels.

7DPlus Video Simulator Rides (Theatres) or Stereoscopic 3D or 7D+ Simulator Rides ON WHEELS

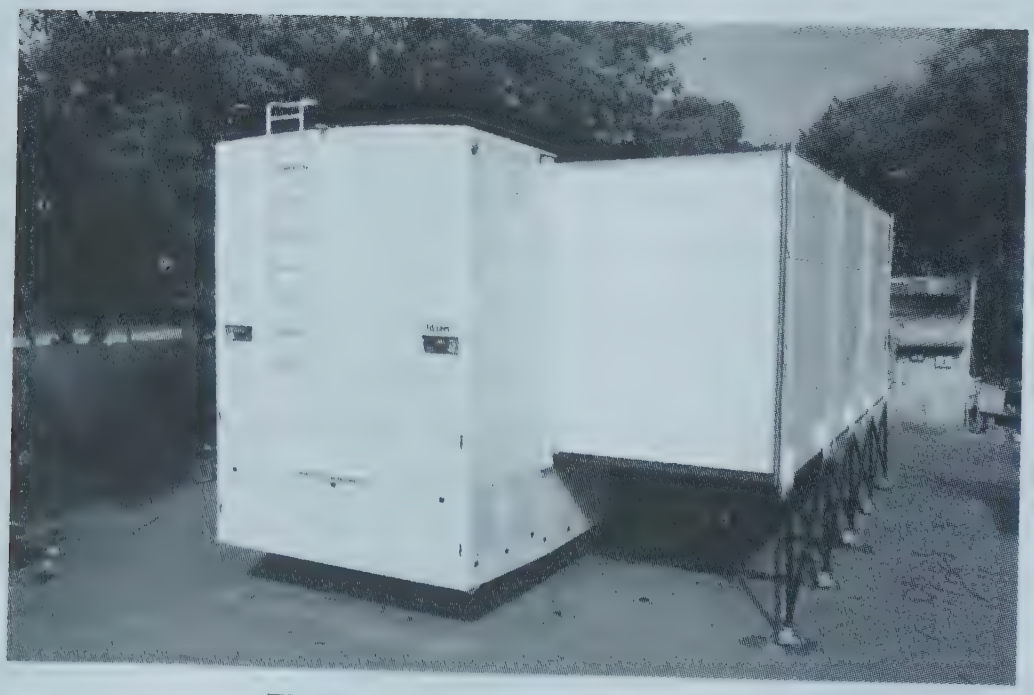
7DPlus Technology Network Company is aiming to provide NewAge Edufotainment (Education, Information & Entertainment) Solutions. It has designed indigenous 7XDPlus Video Simulator Ride Auditorium/Theater into a traveling road show or in other words 7D+ Theater On Wheels or on the move wherever required, it can be parked and provide amusements, education and entertainment to the viewers. These mobile attractions are completely turnkey and ideal for temporary or semi-permanent (quasi-permanent) exhibits at science centres, museums, zoos, fairs, carnivals, religious festivals, Special parties, Celebrations, special events etc and a host of other venues. Each 7XDPlus On Wheels

attraction can be customized for every event with branding and theming inside and out — as well as custom 3D contents. Our standard 3DoF/6 DOF Pneumatic/Hydraulic/servo motion EFX seats are a perfect fit for this advancing technology.

The following pictures are self explanatory to provide the features of 7DPlus Simulator ON WHEELS built by us as a prototype and proof of concept (PoC) to demonstrate the capability of interdisciplinary research out come and built its kind first time in India. It is built on Ashok Leyland Multi-Axle Chassis. It houses World's First and Largest 3D Screen (16'6") Video Simulator Ride having 20 Seats Built on 35' Truck Chassis with Expandable Auditorium On Wheels. International Patent has been filled at Russian Federation under Utility Model Application No.2014115371. It is a self contained Air-Conditioned Auditorium has very good state of the art acoustics insulation with In-built Generator with On-line UPS etc. It has also fitted with Snow Machines, Bubble Machines along with all other Special Effects as mentioned above. The entire indigenous design process of 7DPlus Simulator ON WHEELS with the help of National Design and Research Forum, The Institution of Engineers (India) and Dr.Saurabh Kwatra, Head, International Innovations, New Delhi has resulted in nearly 12 more International Patents which has been filled recently. The proposed Multi-purpose Expandable Auditorium can be used for variety of other applications and can house Intensive Care Unit (ICU), Rural Hospital, Computer/Internet Centre, Mobile Labs, Mobile Digital Library, Live Telecast Sound Proof Studio, Dormitory, Caravan, Mobile Home etc. For Further Details regarding the commercialization of the product can be heard from Dr. K. Gopalakrishnan, Managing Partner, 7DPlus Technology Network Company (New Age Edufotainment (Education, Information & Entertainment) Solutions Company), having its Registered Office at Sakthi Body Works

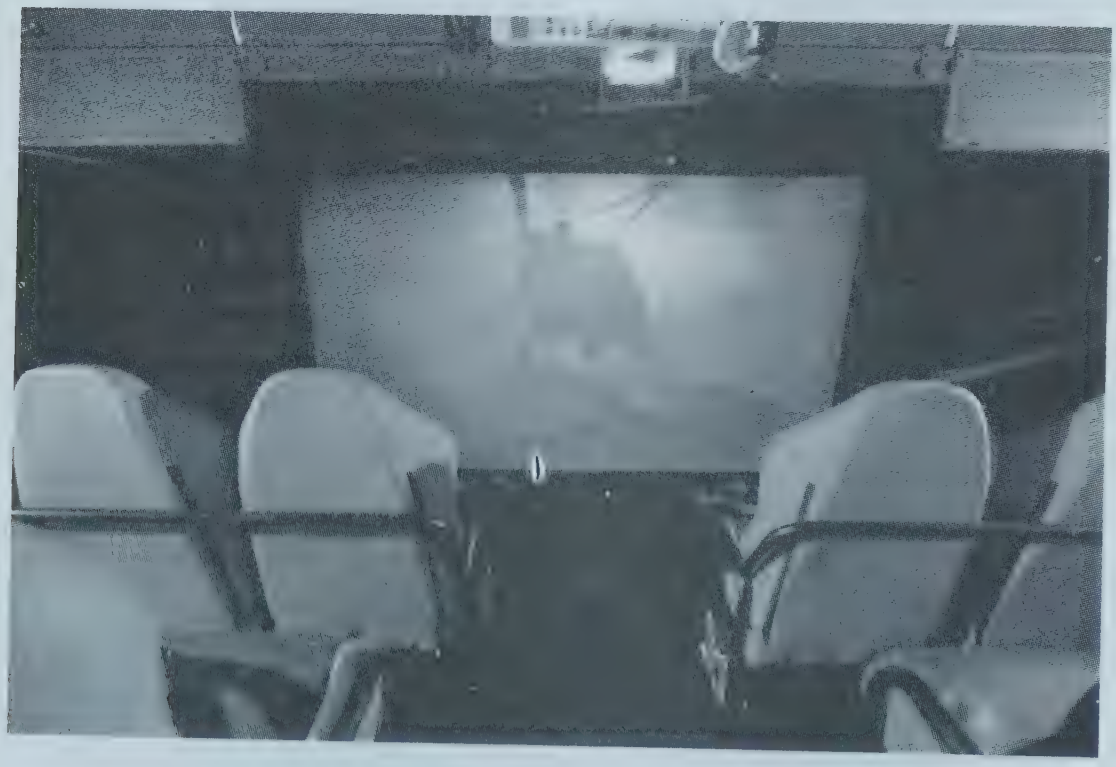
Campus, 46, Poonamallee Bye-Pass Road, (Opp to MTC Bus Depot.), Poonamallee, Chennai 600 056, Tamil Nadu, Mob.: 098451 73730 Email: profgoki@yahoo.com.

Prototype of 7DPlus Video Simulator Ride "On Wheels"



7DPlus Video Simulator Ride
"On Wheels": Screen Portion after Expansion

Conceptual Model of 7DPlus Video Simulator Ride
"On Wheels": Inside View of the Auditorium after Expansion



The Automation of Agricultural Information Systems for Increasing Agricultural Productivity Using Satellite Remote Sensing.

Dr. Wooday P. Krishna, *et al.*

Abstract

There is a dire need to understand the dynamics of rain fed and irrigated agricultural productivity at least at watershed level. Food security decision support systems need location specific information on cropland extent, crop types, their watering methods (e.g., irrigated, rainfed, supplemental), cropping intensities (e.g., single, double or triple cropping), crop rotations, crop productivities, and water productivities. The only source of data that can achieve this goal over space and time, repeatedly, consistently, and accurately is satellite remote sensing when combined with geographic information system(GIS), national and sub-national statistics, secondary data (e.g., elevation, slope, soils, precipitation,, temperature) , and site specific field plot data ; all of which are integrated in the Agricultural Information Systems for food security. As per USGS, the greatest gap in making use of EO (Earth Observation) data for food security analysis is in lack of studies that link croplands to their water use, inconsistencies in methods and

Co-authors :
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approaches, lack of automation, and a lack of emphasis on accuracies and uncertainties. These gaps are being bridged by GCAD-30 type databases. These belong to global crop land databases.

Satellite remote sensing based GCAD-30 will bring global croplands database of any region in a temporal way. In all, eight crops will be monitored which will cover irrigated and rain fed cropped areas including crops such as paddy , wheat , cotton, potatoes, sugarcane etc with appropriate accuracies. In a similar way to GCAD-30, one can also get the separate crop layers for surface water and ground water irrigated crop areas, changes in crop land areas between a water surplus year and water deficit year, estimates of irrigated agricultural water use of the crop lands etc.

Food security is a situation that exists when all people at all times have physical, social and economic access to sufficient, safe and nutritious food that dietary needs and food preferences for an active and healthy life. Under this definition, food security consists of having, on an individual level, the food one needs and wants. This definition then is conventionally subdivided into three main components: food availability, food access and food utilization. Availability refers to the physical presence of food. Access refers to having the means to acquire food through production and purchase.

AIS for automation involve databases related to food systems (including crop forecasting systems), global environmental change, carbon pathways, green and blue water use / management, green logistics, e- governance technologies, renewable energy technologies for irrigation / agriculture , small and big remote sensing communication and navigation satellites linkages etc.The handling of these AIS systems and reaching it to people will become the work of extension offices (both agri extension and water extension) connected with water and agriculture in rain fed and irrigated areas of India.

A brief review of the above mentioned themes and our readiness to accept them will be presented in this paper.

1. Introduction:

Indian policy makers have, till now, adopted a cautious approach and have ensured that the requisite food stock is maintained before launching a massive

drive for diversification and exports of agricultural products. Thus sustained growth in food production through yield augmenting technology and effective distribution of food grains remain as the major planks of the strategy for food security. But doubts have been raised about sustainability in food production. It is essential for food security to be mix of public distribution system (PDS), inclusive growth and employment guarantee. The myriad dimensions of food security unfold when we think of food security as a function of water security, energy security, environmental / ecological security, economic security, and resilience to disasters. The access to common property resources / common property land (CPL) might be a necessary condition and not sufficient one for ensuring sustained income from livestock , and hence may not be a dependable source of food security especially among landless and the semi landless households. With the rapid breakdown of the traditional mechanisms for protection and management of CPRs, costlier substitutes of fuel wood would become increasingly important.

Agriculture is no longer the primary income generating (or labor employing) activity in food supply chains globally and in many developed countries. Processing and packaging and distributing and retailing activities have grown. However, many developing countries still do depend upon agriculture for economic growth. Processes of economic globaliasation have connected commodity markets and food security outcomes across geographies and overtime. Much more agricultural production is traded than 30 years ago. Food-price shocks in one country or region have ripple effects elsewhere. In order to assess sustained and equitable access to food security, appropriate research approaches need to be capable of capturing the interlinked relationships that comprise a food system.

These include the biophysical resources which make food production possible, the resource use demands of food processors and retailers, and consumer behavior, including food preferences, preparation and intra house hold distribution patterns.

Global environmental change (GEC) includes changes in the physical and biochemical environment, either caused naturally or influenced by human activities such as deforestation, fossil fuel consumption, urbanization, land reclamation, agricultural intensification, fresh water extraction, fisheries over exploitation, and waste production. It includes changes in land cover and soils, biogeochemical cycles and atmospheric composition, biodiversity, climate and extreme weather events, sea level and ocean chemistry and currents, and fresh water quality and availability.

At a minimum, a food system includes the set of activities involved in producing food, processing and packaging, food, distributing and retailing food and consuming food, (i.e., linking commodity chains to consumers). To analyze the dynamic interactions among GEC processes, food systems and feedbacks from food system outcomes, the drivers of these activities and their social, environmental and food security outcomes are also included.

The vulnerability of food system components need to be assessed. It may be resources (biophysical, economic, social/cultural), activities (production, distribution etc.), actors (producers, governments, consumers), values (cultural, environmental, political) and undesired out comes (like urban food insecurity, environmental degradation, unemployment and poverty, increase in GHG emissions, loss of biodiversity, social conflict etc.)

The importance of scales and scaling as determining factors in many environmental and food security problems are to be understood. In terms of food security

management, cross- scale (e.g., space and time) and cross-level (e.g., local or global; annual- decadal) interactions are crucial.

2. An Automated Cropland Classification Algorithm:

Pressure to grow more and more food in a world where population is increasing by about 80 million per year (approximately), nutritional demands are swiftly increasing in the developing world, and climate models are predicting that extremes of floods and droughts will become the norm by the end of the century. This spoils the existing efforts for feeding the world. The cropland areas have either stagnated or decreased in many parts of the world due to increasing demand of these lands for alternative uses such as bio-fuels, urbanization, and industrialization. Moreover, ecological and environmental imperatives such as conservation of biodiversity and atmospheric carbon sequestration have put a cap on the possible expansion of cropland areas to other lands such as wetlands and forests. It is of great importance to notice that the food production requires large quantities of water. If the efficiency of water use increases by 5 percent the productivity of crops is likely to increase in the existing areas and untapped potential areas by about 15 percent in Indian conditions. A combination of above issues requires us to produce precise, rapid, and routine mapping of crop lands over large areas such as a country, region, and world which in turn will help us accurately assess , allocate , and save water from agriculture for alternative uses such as industrial, recreational, domestic, and environmental. These cropland and water use products will support food security analysis and planning.

There is a growing literature on cropland (irrigated and rainfed) mapping across resolutions (Ref.1-12). These methods include: (a) supervised classification

methods such as the maximum likelihood classification (Ref.13), (b) spectral matching techniques (SMTs) (Ref.8), (c) decision tree algorithms (Ref.7, 14, 15), (d) neural network methods (Ref. 16,17), (e) support vector machine (18) ,(f) spectral unmixing techniques (Ref. 19-21), (g) tasseled cap brightness greenness wetness index (22-25),(h) space-time spiral curves, change vector analysis (CVA) (Ref. 24) , (i) phenology (Ref. 1,5), (j) fusing climate data with MODIS time-series spectral indices and using algorithms such as decision tree algorithms , image mosaicking using climate data, and sub-pixel calculation of the areas(Ref.4,26), (k) spectral angle mapper (Ref. 12) . However , most of these methods rely extensively on the human interpretation of spectral signatures, making the process resource – intensive, time consuming and difficult to repeat over space and time.

The urgent need of the crop land mapping in order to address food and water security scenarios will require the methods to be automated , accurate, and able to provide cropland maps , statistics , and their characteristics (e.g, irrigated Vs rainfed, crop types , cropping intensities) rapidly (e.g, producing maps within few hours) year after year (hindcast , nowcast, forecast) over space and time once the mega file data cubes (MFDC) for the years are ready through automated methods using automated cropland classification algorithms(ACCAs). Fully automatic methods do not exist, especially over large areas. The best of existing methods are semi-automated, requiring substantial human interaction, and have large uncertainties when working with independent datasets. These semi-automated methods include: (a) spectral matching methods (SMTs),(b) ensemble of machine learning algorithms (EMLAs) (e.g., decision trees , neural networks), and (c) Classification and Regression Tree (CART) . The principle of SMTs (27) is to match the

shape, or the magnitude (preferably) both to an ideal or target spectrum (pure class or "end member"). EMLAs include decision tree algorithms and neural networks (Ref. 2,28), which are computationally fast to implement. CART is a datamining decision –tree that takes spectral and ancillary data and recursively splits it until ending points or terminal nodes are achieved(Ref.29,30). These methods are powerful, and have shown potential for automation. Nevertheless, the limitations of implementing these algorithms include complexity of methods, inability to demonstrate repeatability, of algorithms to produce accurate cropland mapping over time , and the substantial expert interaction required to run the algorithm successfully and accurately when applying them for different time periods such as , for example , for years other than for which the algorithm is developed. There is a need for new perspectives and concepts for developing simple algorithms, yet powerful and accurate year after year is urgent in the present food security scenario.

Hence, an automated cropland classification algorithm (ACCA) has been developed for Tajikistan as an example by team of scientist from USGS, IRRI, IWMI, organizations. ACCA will replicate \ reproduce cropland characteristics (e.g., cropland extent, area, geographic specificity, and irrigated versus rainfed using MFDC accurately when it is compared with a reference \ truth cropland layer (TCL). The goal will lead to accurately map cropland from other land uses and to accurately distinguish between rainfed versus irrigated crop types. This needs to be replicated for all other countries including India.

2.1 Remote Sensing of Crops / Land use in India and global croplands:

Agriculture, the backbone of Indian economy, is one of the most important fields where space technology is

being used extensively. Remote sensing data need for agricultural applications has been given high priority in the Indian national space program. A national level project, crop Acreage and Production Estimation (CAPE), was initiated in eighties to provide state and district level forecasts for major crops in India. Use of high resolution digital data (LISS-I/II/III) for crop production forecast at district / state level for important crops in their major growing seasons is carried out under CAPE project. Simultaneously a need to make national level forecast with results at state level has also been felt. Such an analysis is essential for providing multiple forecasts as well as assimilating forecasts from other approaches. This has been identified as one of the key components in the FASAL (Forecasting Agricultural Output using Space, Agro meteorology and Land-based observations.) project. An attempt was first made for national –level wheat acreage estimation using multi-date WIFS data from IRS 1C in 1995-96. The approach consisted of 20x20Km sample segments, 10% sampling fraction and major wheat growing Districts (more than 10% geographic area under wheat) of wheat growing states(UP, Punjab, Haryana, MP, Rajasthan and Bihar) forming the study area. A new multi-date classification approach using temporal spectral behavior for identifying the wheat crop was developed. National Rice Production Estimation for Khariff rice was also done in 1996 Khariff season using multi-date IRS-1C / IRS – P3 WiFS and meteorological data. The wheat production forecasts under CAPE-II are made for : a) district level forecasts using high spatial resolution data, b) state level forecasts using multi-date WiFS data , and c) additional studies (multi-year change and use of crop simulation models for assessing crop prospects).Large errors are noticed in Rajasthan and UP. A study of the images showed the poor accuracy due to interspersed small fields of wheat –mustard and wheat –sugarcane in these states respectively. During 1997-98, 98-99 improved

methodologies were adopted to obtain multiple crop forecasts as envisaged under FASAL.These crop statistics were compared with Directorate of Statistics and Economics / State Department of agriculture estimates.

FASAL program implementation requires a large and diverse historical as well as real time data related to crop and weather which is available with state department of agriculture (SDA) or state agricultural statistics authority (SASA) and India Meteorological Department (IMD) respectively. Creation of extensive database of relevance in crop forecast is considered along with establishment of a computer network for data exchange and transfer in real time. Meteorological regression models are used to get first forecast of rice acreage. Deviation index models (rainfall, yield and acreage deviations) and models based on water requirement of rice are used to give zone-wise first rice acreage forecast and district wise early season rice acreage forecast. Rice yield forecasts were provided three times using truncated models developed using data of vegetative, reproductive and maturity phases of rice crop. Daily rainfall data of current season were to be collected, aggregated and indices derived to predict yield. Use of remote sensing data in making crop inventory has been demonstrated in many parts of the world. In India, crop acreage and production estimation (CAPE) project since 1988 has demonstrated the potential of remotely sensed data for crop inventory. In CAPE, crop acreages across the years are estimated but spatial distribution of crops or crop change detection was not done.(Ref 31)

2.2 Needs for crop area and production estimation / forecasting, Indian Scenario:

Crop area and yield estimation are the two components of crop production estimation. For most purposes (in particular market management and food security) the

real need is information on production, although only the area estimation issue is analyzed more. The priority can be on area estimation if area has a strong interannual variability while yield remains relatively stable. On the contrary the priority will be on yield for countries where crop area change is rather smooth or predictable and yield change can be stronger. The increasing impact of the biofuel policy (in advanced countries) and the turbulences in the agricultural commodities market have introduced an additional source of instability on the managing decisions of farmers and therefore an enhanced interest on early crop area estimation.

Decision makers have a certain level of knowledge of the situation of agriculture in the area they deal with, but some uncertainty is always left. Additional information sources, in particular remote sensing, aim at reducing this uncertainty. The value added can be measured by the fulfillment of at least one of the following conditions:

1. The inaccuracy of estimation is smaller than the uncertainty of the information previously available.
2. The geographical detail of the estimates provided is finer than the existing information. This target corresponds to crop mapping rather than crop area estimation.

In brief the needs can be summed up as : 1). Market monitoring and food needs assessment, 2) accuracy needs, 3)Geographic detail, 4) timeliness, 5) foreign analysis and worldwide estimates, 6) area or area change.

2.3 Differences between Indigenously available crop areas and global dataset crop areas:

Sl. No.	Indigenously available Crop Areas	Global Dataset Crop Areas (GCL)
1	Available with central / state government departments for few years and few areas and few different crops. Likely to be available after a letter of request.	Available on web portals , of international organizations, the published maps and statistics are downloadable
2	There is a good match of DOA (Dept.of Agriculture) / DOE&S (Dept.of Economics and Statistics) aggregated at district or state level with those crop areas statistics obtained from remote sensing.	There is a fair variation of area statistics figures of state with that of remote sensing based one, but are claimed to be spatially representative as well established methodologies are applicable throughout the world.
3	Spatial and temporal statistics are not directly available for the entire year	Spatial and temporal statistics are available for an entire year
4	There is no systematic check on spatial distribution of the cropped area in map form or otherwise	There is a systematic / rigorous check on the spatial distribution of the cropped areas.
5	Uses (if map form) a standard type of supervised classification (maximum likelihood) for classification.	Uses unsupervised classification method with a lot of statistical interferences and field checks while classification
6	No irrigated area fraction concepts (a lacunae of method with 32m and 28m resolution RS images)	Irrigated area fractions are calculated b y several methods for better comparison.
7	No rigorous spatial crop area accuracy assessment. Routine point sampling methods employed.	Fuzzy and area weighted approaches for spatial crop area accuracy assessment
8	No vegetation phenology specified crop pattern calendar on a map	Vegetation phenology based crop pattern calendars of each crop type on a map.
9	Rudimentary spatial matching techniques by using point (small patch) training sites.	The quantitative and qualitative spatial modeling of the HTS -LULC classes with the target spectra which is either ideal spectra of end members and for recent time series LULC classes (spectral correlation similarity(SCS) ; spectral distance similarity value (SSV) ,; modified spectral angle similarities(MSAS)
10	Water resources flow cannot be visualized in irrigated commands	Water resources flow can be visualized in irrigated commands
11	Irrigation and agricultural engineers cannot use this for finding water productivity	Irrigation and agricultural engineers can use this for finding water productivity areally.

2.4 Automatic Cropland delineations from small satellite constellations over only Indian Region.

The small satellites have much shorter development timelines, ranging from 18-24 months. Small satellites have shortened technology refresh cycle made possible by the lower costs. These small satellites often have less redundancy than their large counterparts which can mean shorter life on orbit. There will be hedging against design problems or component failures since replacement satellites can be launched much sooner. EO images are often limited by cloud cover, with roughly 66% of the earth's surface covered by clouds throughout the year. Mixed constellations can operate in multiple environments such as in cloudy condition (SAR-synthetic aperture radars) and at night (IR/SAR-infrared) and can provide contextual information to images (HSI). The early warnings on water quality of lakes, water supply, power network stability, transportation network stability, crop failures, ecosystem vulnerability, environmental flows, eutrophication status of wetlands, biodiversity on thresholds etc., are going to be in need of these mixed satellite constellations. (see Fig. 1)

Fig.1

2.5 Some Small Satellite Projects Which can be thought of are :

A. Small satellite for monitoring water reservoirs and their irrigated agriculture every ten days:

One satellite with a ground station and the launching facility provided by ISRO (free of cost) : Rs.5 crores (one million dollars)

Outputs: These below mentioned outputs help in managing the distress year water resources between inter-state water reservoirs.(It is not only the satellite data but proven applications using satellite data will be given to External Agents – user agencies)

1. Every ten days satellite data on reservoir water spreads and irrigated command area crops.
2. The calibration and validation of crop area / WSA estimates with suitable image processing algorithms.
3. The feasible water available behind a water reservoir between dates of satellite overpass. (Use of available, proven algorithms for Indian Water Reservoirs of Multipurpose / Single purpose Medium and Major Projects (Live Storage Capacity preferably between 40 TMC to 150 TMC) TRL-10 at implementation level.**
4. The crop water use in the command area at engineering level (TRL-8). This needs to be calibrated before operationalisation **
5. The regional models of water use considering ten important reservoirs in a basin. (TRL -6)

Many more can be planned based on user requirement surveys with water resources engineering / agriculture departments.

2.6 Near-space vehicles in High Resolution Wide-Swath Remote Sensing:

Spaceborne SAR has an imaging capability of wide swath (the width of the ground area covered by the radar beam) with a limited azimuth resolution. By contrast, airborne SAR has an imaging capability of high azimuth resolution., but limited swath coverage. There is,

therefore a desire to increase swath coverage and azimuth resolution simultaneously. As near-space vehicles operate at altitudes higher than that of airplane, but lower than satellites with a high flying speed, compared to Spaceborne and airborne SARs, simultaneous relative high resolution and wide swath (HRWS) remote sensing is possible for near-space vehicle borne SAR. Microair (MICAV) vehicles serve these purposes also, but their dwell time in atmosphere is very less. These near-space satellites also can be designed and used for crop land monitoring in near future.

3.0 Automated Reservoir Regulations for Water Releases:

Medium and large irrigation projects in India need to be regularly monitored to increase their efficiency in water use by ten percent from present level of 25%. The present reservoir operating rules follow the standard rule curves called as SOPs.

Real time reservoir operation implies the optimal operation of an existing reservoir system and decisions regarding releases for various purposes have to be made on a considerably shorter time period. The overall procedure is to optimize in turn a monthly model over a period for 24hr. Outputs from one model (monthly ending storage or daily releases) are used as inputs into the next echelon model, and iterating and updating whenever new operation on stream flow prediction becomes available. The monthly and daily models have been completed and tested out on projects data and system constraints.

The evaluation of current operating rules of existing reservoirs is very important to meet the changing demands according to the public needs and objectives. An operating plan or release is a set of rules for determining the quantity of water to be stored or released from a reservoir or a system of several reservoirs under various conditions. Typically, a regulation plan includes a set of quantitative criteria within which significant

flexibility exists for operator judgement.The operating rule provide guidance to the water managers who make the actual release decisions. Reservoir system analysis models are developed to support: (a) in sizing of reservoir storage capacities and establishing operating policies during preconstruction planning of new projects, (b) in evaluation of the operating plans of existing reservoir systems, (c) in administration of water allocation systems involving water rights and agreements between water suppliers and users, (d) in operation planning for developing management strategies for the next year or season, (e) real time operations.

3.1 Remote sensing based reservoir capacity estimation uses data of different dates depicting the reservoir water levels between MDDL (minimum drawdown level) and FRL (full reservoir level) pertaining to one operation year or two. Water spread area is calculated by digital image processing techniques, viz., density slicing of individual band, ratioing or classification. Using the water level values provided by the reservoir authorities, area – elevation graph is plotted. Appropriate mathematical formulae are used to calculate capacity of reservoir at different storage levels. Reservoir sedimentation / recapacity evaluation surveys are essentially based on mapping of water –spread areas at the time of satellite overpass. It uses the fact that water-spread area of the reservoir reduces with the sedimentation at different levels. The water spread area and the elevation information is used to calculate the volume of water stored between different levels. These capacity values are then compared with the previously calculated capacity values to find out the change in capacity between different levels. (Ref.32)

In another study, water spread areas (WSA) from satellite remote sensing were used for estimating water volumes between two satellite overpasses (using water levels on those dates of pass as available with water resources / irrigation field authorities) in an irrigation season for several dates (say eight or nine as per satellite

data availability) . These volumes were used interactively in a water balance approach near a large reservoir site for an irrigation season. Generally, the carry over storage is not practiced in these upstream reservoirs. Reservoir will be empty at the end of the season. This is taken as ground truth / field observation and water balance was carried out at reservoir site to arrive at actual amount of water available at each time period. A comparison was made by using WSA contours obtained from field surveys and that from remote sensing. In a reservoir capacity of 115 TMC the discrepancy in volume of water at the end of an irrigation season is around 15 TMC in one irrigation year and 20 TMC in another year. (Ref.33) Such quantifiable discrepancies in all reservoirs of a basin bring forth the utility pattern and performance assessment of their reservoirs, when carried out for a number of irrigation years. . This gives better inputs for improved basin water accounting, reservoir operation and regulation scenarios.

4.0 Food Security, Food Systems, Global Environment:

Food security is a situation that exists when all people at all times have physical, social, and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (Ref 1: FAO (2001) The State of Food insecurity in the World. Rome. Food and Agriculture Organization of the United Nations, p-58) Under this definition, food security consists of having, on an individual level, the food one needs and wants. This definition then is conventionally subdivided into three main components: food availability, food access and food utilization. Availability refers to the physical presence of food. access refers to having the means to acquire food through production and purchase.

First, arrive at country wide estimates of food security as per FAO (2001) which uses a measure of "undernourishment" as a proxy for food security.

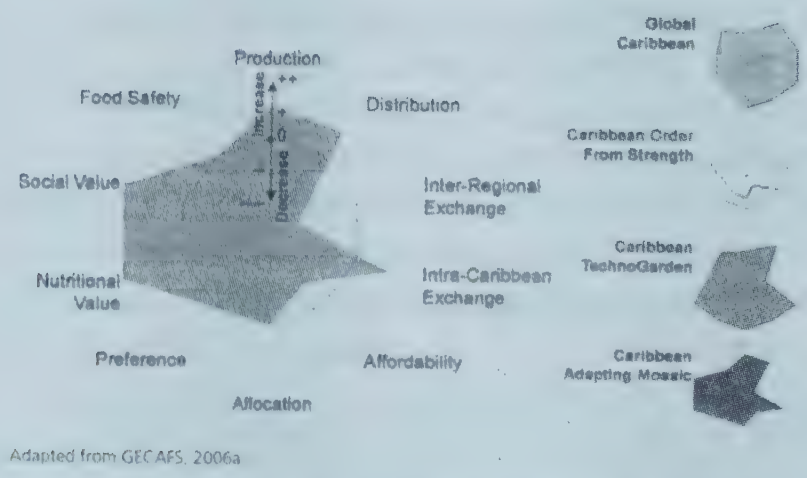
Second, use nationally representative household survey data to construct detailed measures of food security. Although more difficult and time consuming to construct, and more limited in their spatial and temporal coverage, such measure can provide much more detail on both the nature and location of food insecurity in a given country. Smith et al (Ref2: Smith) calculate rates of food insecurity on average 20% higher than FAO estimates, rising up to as much as 40% in some countries, and attribute much of the difference to significantly lower estimates of mean food consumption when using household survey data directly.

The vulnerability of food system components need to be assessed. It may be resources (biophysical, economic, social/cultural), activities (production, distribution etc.), actors (producers, governments, consumers), values (cultural, environmental, political) and undesired out comes (like urban food insecurity, environmental degradation, unemployment and poverty, increase in GHG emissions, loss of biodiversity, social conflict etc.).

Global environmental change (GEC) and food security both involve a host of interacting issues. Despite the complexity of the issues involved, the concept of evidence based decision making is straightforward. Communication across the dynamic and shifting interface between science and policy – making can be enhanced through the deployment of skilled individuals and organizations- knowledge brokers and boundary organizations-whose role is to facilitate mutual understanding and interpretation off knowledge needs and significance. Knowledge brokering is usually applied in an attempt to help knowledge exchange work better for the benefit of all parties. It involves bringing people together, helping to build links, identifying gaps and needs and sharing ideas. It also includes assisting groups to understand each other's abilities and needs, and guiding people to sources of knowledge. This may also include summarizing and synthesizing research and policy into easily understood formats and

translating policy problems into researchable questions. Examples of boundary organizations include 'expert advisory committees, scientific assessments, research management agencies, consensus conferences and so on'. The boundary objects are those which 'sit between two different social worlds, such as science and non-science', and they can be used by individuals. Examples of boundary objects include assessment reports, maps and computer models. Involving stakeholders in research planning can reveal issues that would be missed by a science-alone process. A decision supporting systems (DSS) need to be built to mange food security. Application of a holistic decision support process raises awareness in the policy community of the interactions between GEC and food systems; identifies and communicates the options and constraints facing researchers and policy makers; identifies methods and tools that facilitate the dialogue between scientists and policy makers related to GEC and food systems; and helps both researchers and policy makers assess the viability of different technical and policy adaptation strategies by analyzing their potential consequences (feedbacks) for food security and environmental goals. DSS allows the use of scenario exercises to facilitate communication among stakeholders. Scenarios are carefully crafted stories that attempt to cut through uncertainty by articulating possible pathways into the future.

Fig.2

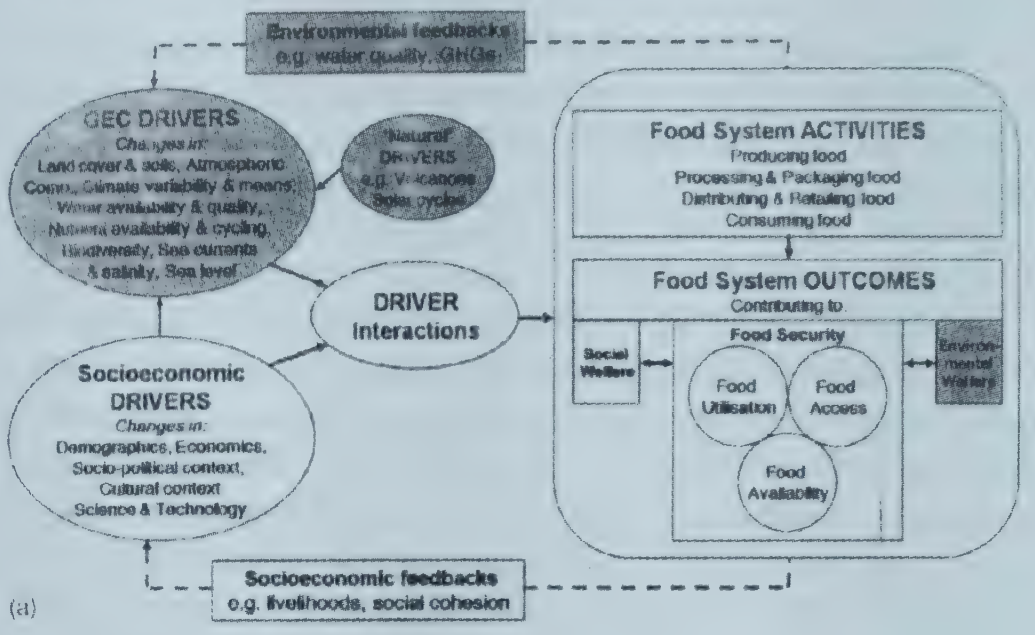


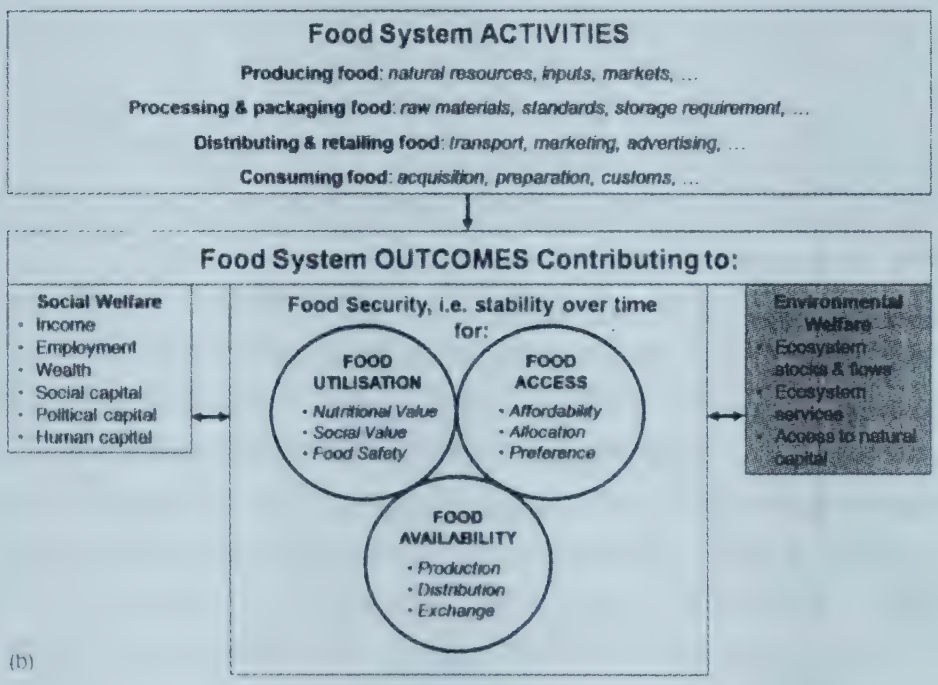
Indicative food security diagrams for four Caribbean scenarios

Food security is a principal outcome of any given food system (see Fig.3).Although in many cases food security is not achieved ; instead people are undernourished and face regular hungry seasons, or struggle with a host of on-communicable diet-related diseases, or spend the major portion of their income on poor or inadequate diets.

In order to analyze the factors underpinning food security, the food security situation of a given unit of analysis can be explained in terms of three components, each of which has a number of elements. Food availability is the amount, type and quality of food a unit has at its disposal to consume; food can be available through local production; availability can rely on distribution channels to get food where it needs to be; and availability depends upon mechanisms to exchange money, labor or other items of value for food. Access to food is the ability to gain access to the type, quality and quantity of food required, and it can be analyzed in terms of the affordability of food that is available, how well allocation mechanisms such as markets and government policies work, and whether consumers can meet their social and other food preferences. Finally, the utilization of food refers to ability to consume and benefit from food; it thus depends upon the nutritional and social values of food, and the safety of available and affordable food. Although the food system activities have a large influence on food security outcomes, these outcomes are also determined by socio-political and environmental drivers directly, as shown in Fig.3b. Stability is an important dimension of all these components of food security.

Fig.3





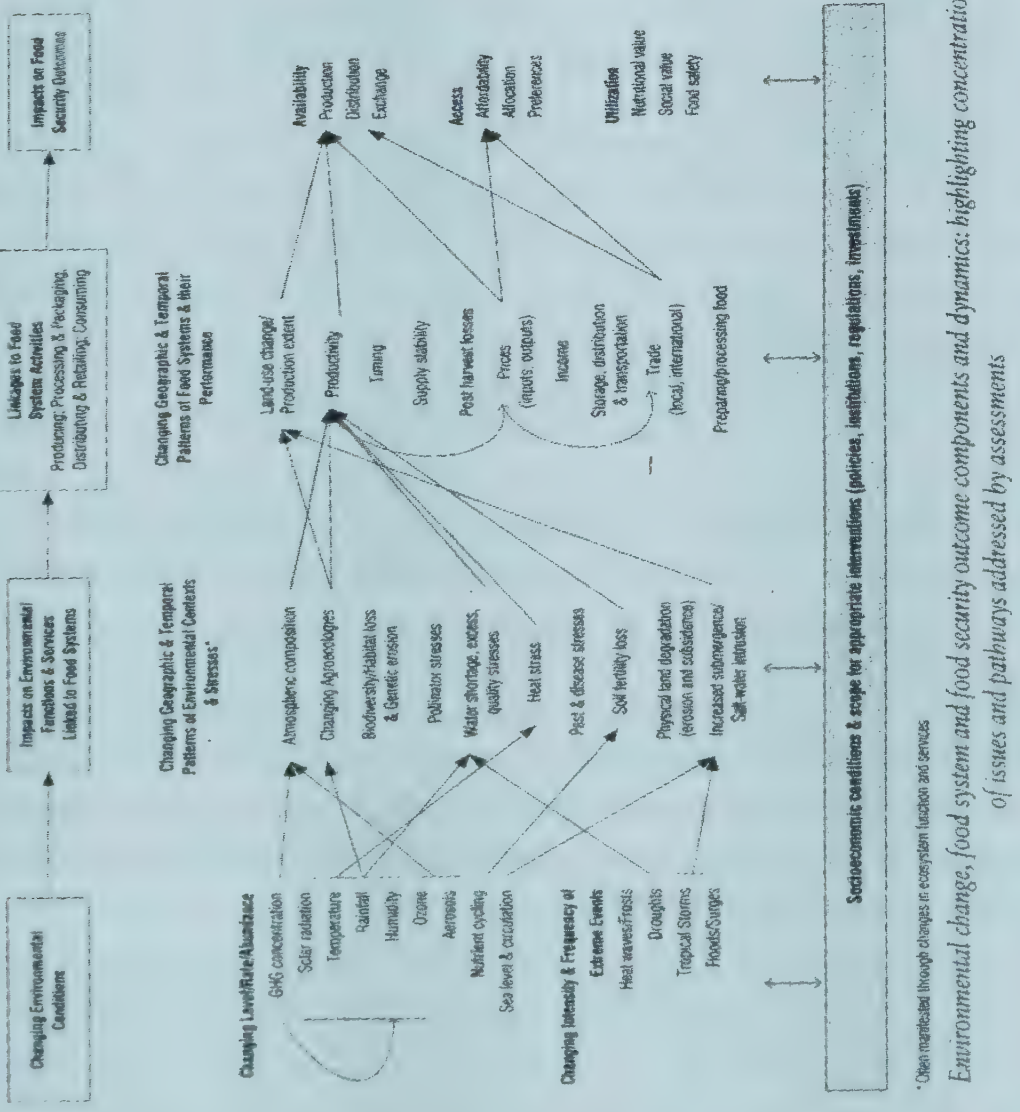
Source: GECAFS, 2009

(a) Food systems, their drivers and feedback; (b) components of food systems

Fig. 3: (a) Food Systems, Their Drivers and Feedbacks
(b) Components of Food Systems

The environmental outcomes of food systems include both the stocks of available natural capital and ecosystem services- this recognizes the significant impact that food system activities have on ecosystem. (See Fig.4). This type of understanding and utilization of DSSs help in adaptation to food systems.

Fig. 4



Environmental change, food system and food security outcome components and dynamics: highlighting concentration of issues and pathways addressed by assessments

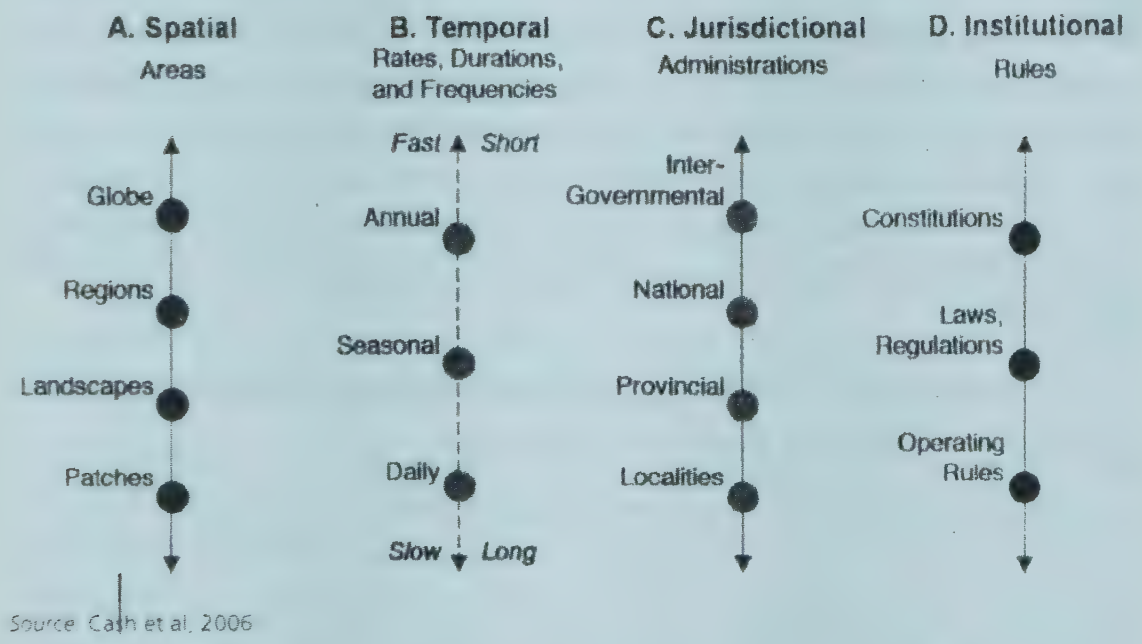
4.1 Interactions across scales and levels in food systems:

Like all complex and dynamic systems, the processes and components within food systems are highly interconnected. Key to systems or complexity analysis is an emphasis on dynamics, interactions and feedbacks,

many of which occur at multiple levels and scales. Thus there are many feedbacks among activities, outcomes and drivers, as shown in Fig. a. Feedbacks arise when social, economic and political actors respond to changes, as well as when ecosystems respond to a variety of drivers of change. Although feedback processes are inherent to coupled social-ecological systems, in food systems feedbacks cause concern because they often have negative and unintended consequences which are difficult to manage or govern, especially if they occur across different levels and scales (as they necessarily do in highly globalised food systems)Of primary concerns for GEC research are the feedbacks from food system activities to ecosystem stocks and services, related to , for example , land-use and land-cover change, changes in water quality and quantity, and greenhouse gas emissions. Feedbacks can also be social, as, for example, people drawdown their assets below critical thresholds (after a shock) and fall into poverty traps; or when decisions UK (India) consumers make about purchasing air-freighted vegetables affect the incomes of farmers in Kenya (Malyasia) , or changes in international coffee markets benefit Cuban farmers but hurt Vietnamese farmers . In complex systems feedbacks are not predictable or regular, because unexpected and undesirable outcomes result. As most policy is not designed for surprise, unanticipated feedbacks create policy challenges (Ref.34).

A predominant feature of 21st Century food systems is that they are inherently cross-level and cross-scale. In a key publication (Ref .35) Cash et.al. define 'scale 'as the spatial, temporal, quantitative or analytical dimensions used to measure and study any phenomenon, and 'levels' as the units of analysis that are located at different positions on a scale (Fig.5). GEC and food security issues span a number of different scales (e.g. spatial, temporal, jurisdictional, institutional, management) and a number of levels along each of these. Food systems are inherently multiscale and multilevel.

Fig. 5



Different scales and levels critical in understanding and responding to food system interactions

4.2 The Main Uses of Global Cropland maps in AIS could be the following.

4.2.1 In Rainfed Crop land regions of India :

The agro climatic zones (India -Planning commission 1989) can be defined as a land unit having a greater degree of commonality or homogeneity with respect to various conditions and resources such as climate , topography, soil type, geological formation, water resources, mineral resources, cropping patterns etc.There are 15 broad agro climatic zones. For micro level planning, these 15 agro climatic zones are subdivided for homogeneity on the basis of soil, topography, climate, cropping patterns into 73 sub-zones.

We have agro ecological regions of India (NBSS&LUP, 1992) which are classified giving more importance for bio climates considering water balance and energy available, moisture availability through soils, quantified growing periods considering water balance technique,

and vegetation type supported by the prevailing climate. The agro ecological region can be defined as a land unit representing uniform conditions with respect to physiographic, soils , climate , length of growing period ,and other environmental conditions congenial to crop production which is obtained as a net resultant product by superimposing agro-climatic regions and the isolines delineating length of growing period on the soil and land form map.

The general rainfall problems in dry land regions influencing crop production are :

1. Uncertainty and meagerness of annual rainfall, 2. Prolonged breaks in rainfall, 3.High intensity of rainfall, 4.Late onset of monsoon, 5.Early cessation of rains,6. Frequent heavy showers with less duration, 7. Less frequent light rains which only wet the soil surface and usually get evaporated, without having any appreciable contribution to meet the crop water requirement, 8.Low moisture retention capacity, 9.Low fertility of soils, 10. Desiccating conditions due to high temperature, low humidity and high winds.

As some of the states are already equipped with a large number of automatic rain gauges (more than thousands) in the last five years, they can be effectively used to monitor the above parameters pertaining to the problem of dry land regions. This characterization of dry lands get enhanced value when we start using global croplands / their water use estimates from satellite data.

4.2.2 The Cropping Systems: Few definitions surrounding cropping systems definition and the indicators for evaluating productivity and efficiency.

Cropping pattern: The yearly sequence and spatial arrangement of crops or crops and fallow on a given area.

Cropping System: The cropping patterns used on a farm and their interactions with farm resources, other farm enterprises, and available technology that determine their makeup.

Farming System : It is a decision making unit comprising the farm household, cropping and livestock systems that transform land , capital (external inputs) and labour (including genetic resources and knowledge)into useful products that can be consumed or sold. The farming systems comprises the cropping system(s) , the livestock system(s) and the farm household.

Multiple cropping: The intensification of cropping in temporal and spatial dimensions; growing two or more crops on the same field in one year.

Interactions in mixed crop communities include the following competitions- competition for solar radiation, carbon dioxide, soil factors, allelopathy, annidation etc.

The indices for evaluating productivity and efficiency are: 1. Relative yield total / land equivalent ratio (LER), 2.Effective land equivalent ratio (ELER), 3.Staple land equivalent ratio (SLER),4. Land equivalent coefficient (LEC) , 5.Area time equivalency ratio (ATER) , 6.Area harvest equivalency ratio (AHER) , 7.Crop performance ratio (CPR),8. Yield advantage index (YAI),8.Monetary equivalent ratio (MEA) . The global cropland area database at 30m resolution [GCAD-30] is more useful in using area figures in a computer based calculations, modeling and visualization. Evaluation and productivity of multiple cropping systems is carried out by arriving at multiple cropping index (MCI) , diversity index(DI) , harvest diversity index (HDI) , simultaneous cropping index (SCI) , cultivated land utilization index (CLUI) , cropping intensity index (CII) , Specific crop intensity index (SCI) , relative cropping intensity index (RCII). GCAD -30 maps and database opens up the Pandora box of indicator based assessment of cropping systems study.

Methods of yield gap analysis in India: The potential yields were estimated using a crop simulation approach and review of research station experimental data. The yields estimated coupled with the state level yields were used to estimate the yield gaps for a particular crop as

explained next. Yield gaps were quantified using simulated potential yields, experimental potential yields and the state mean yields, all obtained under rain fed conditions. Simulated yield gap was the difference between the simulated mean potential yield and the mean state yield. The experiment station yield gap was calculated as the difference between the experiment station mean yield and the mean state yield.

4.2.3 Spatial data is essentially geographic data and statistical analysis of this data is connected with indices of aerial location, shifts of population, agricultural output etc. GCAD30 maps can be used for Yield gap studies, supply of inputs and services for agriculture and provision of credit, Rainfall distribution or ground aquifer water available for conjunctive use etc. Replications and innovative research is possible with new databases on crop/ water use dynamics obtained from satellites data. This helps to manage conjunctive use water conflicts. Stock and flows of natural resources (water) and anthropogenic resources (seed, fertilizer etc.) in the regions of crop dynamics obtained spatially, and can be studied objectively.

Facilitating access to nearest APMC using crop dynamics of the region. The GIS data on APMC units in the region and calculations of crop loads that can be handled by them at their existing location and planning for new units, these crop land information helps.

GCAD helps in identifying target population of environments.(TPE) . Historic weather data, genotype performance in multi environment trials (METs) and crop distribution information can be used to determine the frequency of occurrence of defined stresses. Gates and Rockefeller foundation funds can fill the voids of public sector funding since 1980s in developing countries. Markets knowledge for poor- It enables, expanding private sector provision of inputs like seeds and fertilizer which faces numerous difficulties, including high transport costs and weak demand from

credit-constrained and risk averse farmers. Expansion / Modernization of irrigation infrastructure for improving water productivity of the affected region can be done using GCAD-30. The technical capacity for irrigation development in the districts can be planned using GCAD 30.

It further it helps in:

Breeding strategies to adapt crops to a changing climate. The genetic options that can be used to increase the water use efficiency. The first step in breeding crops with improved response to water and temperature stress is identification of genetic variability governing the plant response. This response may be environment specific and its genetic control is likely to be complex. Soil type and associated water holding capacity and infiltration rates, crop management responses, timing of water stress during the plant growth cycle, temperature and biotic constraints will all influence plant response to drought. The study of continuum of spatial patterns (totally clustered to totally uniform via simple random pattern) of crop type distribution along with determination of the dominant stress patterns in the target environment is of critical importance if the appropriate genetic variability is to be identified and used in crossing.

Panel Analysis and Cross- Section Analysis Models: A crucial requirement for any cross-sectional study is climate variation across space. (ET and Water use variations) .A panel uses variation in weather (i.e. year to year fluctuations in weather) as a source of identification and not differences in average weather. GCAD helps in choosing fixed effect or random effect models in appropriate agro-ecological regions.

These are generally done to move research from local to regional scales. The cross-scale and cross-level interactions for food security can be achieved using global croplands database. The importance of scales and scaling as determining factors in many environmental

and food security problems in terms of food security management, cross-scale (e.g, space and time) and cross- level(e.g, local-global; annual – decadal) interactions are crucial and have to be central to the food security policies. In general , there are three situations in which combinations of cross-scale and cross-level interactions threaten to undermine food security:

Ignorance: the failure to recognize important scale and level interactions in food systems (e.g., distress cattle sales that reduce national price.

Mismatch: the persistence of mismatches between levels and scales in food systems (e.g, food security responses planned at national level versus community level)

Plurality: the failure to recognize heterogeneity in food systems in the way that scales are perceived and valued by different actors, even at the same level (e.g, local food programmes local safety nets.)

Food miles problems: The phrase 'food miles' was originally coined to encapsulate a broad range of environmental, social and economic problems resulting from the globalizing of food supply systems. Now, however, the phrase's broader, more holistic intent has been superseded by a narrow focus on the environmental (and specifically CO2) impacts of transporting food over long distances. The basic simplified message that the food miles label now carries in the public consciousness is that food transport today is excessive and unnecessary , and that, essentially , farther is worse and nearer is better. Research has shown recently that adopting a life cycle analysis (LCA) approaches captures the systemic impacts of globalized food provisioning systems and their contribution to climate changing emissions. The issue of self –sufficiency , food security and food miles problems are to be considered together in understanding adaptations of a country for climate change or sustainable development of natural resources. GCAD-30 with

additional information in GIS layers helps in understanding this food miles problem and LCA models in a quicker way. Perhaps the key point with respect to food security is that strong local, regional and national supply networks are important, as are global ones, but in all cases they will be strong only if the agricultural base is environmentally sustainable.

Production relations in agriculture with RS&GIS data leads to multi disciplinary research. Irrigation engineers, agronomists, economists, sociologists, mathematics and computer scientists have to work together. The liberation which the modern world needs is in terms of liberation from the worldly woes of oppression, poverty, hunger, disease, and deprivation and ignorance at the social level for large masses of people.

Methodology using spatial patterns of data: Centro graphic distances: Mean centre is useful in tracing the changing pattern of a single distribution like population or resource over time. Median centre measure: APMC collection centre is located in a rural area, in theory at least the theoretical optimum location of it can be determined regarding the distribution of students. Mode centre is the grid square in which there are more occurrences than in any other grid square. It is thus possible to pick out modal centre easily from a gridded distribution of the values. Standard distance deviation : SST= SSW + SSB measure is regularly used in research methodology of agricultural production plots.

Technology oriented job creations: Mobile based ground / field surveys--- ingestion into main databases. The departments for natural resources management like water and rain fed crops can emerge. The existing departments of irrigation and water resources can (be revamped to make them) start thinking of water resources management for crops in an appropriate way rather than only building structures without even understanding the carrying capacity of the lands and existing productivity levels.

The nuances of social science research in India will be remedied in Karnataka to begin with, if one starts using GCAD-30 maps. The consultation and participation, potential increase of work loads in connection with agricultural intensification and water use, gender sensitization in decision making at WUA, WUG, O&M System, can be envisaged.

Satellite data helps in managing water use in crops in a river basin context very well.

4.3 Other Uses of automating the AIS could be in the following engineering disciplines:

Low Carbon Pathways for Agricultural Crops, Green and Blue Water Management, Global Croplands (Large satellites and small satellites) , Design farm vehicles and farm equipments on bio-fuels, Radio isotopes for plants and soils deficiency identification, Green Logistics (vertical integration of services related to farming, warehousing, and other logistical , processing, and retailing can help direct farm-firm linkages by lowering transaction and transportation costs and strengthening the supply chain to enhance value addition. Ground water aquifers as engines of agrarian growth, cooperative farming and mechanized agriculture, Applications of AI Expert Systems in Agriculture, Robotic and Sensor Technology for Agriculture and solution to problems, SAM (Social Accounting Matrices) approach in understanding Agriculture related problems.

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Report of the IEI Expert Committee for reviewing of the Western Ghats Ecology Reports

Conclusions and Recommendations

The IEI Expert Group analysed the report with the focus as to how developmental issues are addressed. Major developmental areas considered are agriculture and plantations, water management, Development of Roads, Highways, Airports etc., Dams and power projects, Mining and minerals, Extraction of Forest produces, Agro-food industries, Tourism and Construction of buildings. The development concerns of the region were identified and discussed from the Engineers' point of view with various stakeholders. The salient features of the above discussions are given below.

Agriculture and Plantations

Agriculture and plantation crops are a major economic activities being undertaken in the Western Ghats' region for over a century. Large extend of tea, coffee, rubber and spices plantations are established and there products have achieved International acclaim. The spices route of International trade with India was well known for centuries and its blockade contributed to explorations which finally resulted in finding a sea route

to India during the middle ages. The fertile planes at the base of the hillocks grow paddy plantain, sugar cane and a number of horticultural crops. The WGEEP panel have arrived at a conclusion that development of plantations have degraded the ecosystems of the Western Ghats' of the region. There is no scientific evidence that either plantation crops or mono cropping over the years have rendered certain species have become extinct or rendered them endangered. In fact the existing ecological system in the Ghats' have adapted the new species came in and got them integrated into the main stream of bio-diversity of the region. As regards, further agricultural development of the region shall essentially focus on sustainable agriculture encompassing diligent use of fertilizers and other agro chemicals, fertigation and reduced energy intensity of farming. As the country has not yet decided on adoption of genetically modified crops there is no question of accepting it in the Western Ghats also.

Development of Roads, Highways, Airports etc

Construction of roads, bridges and other civil infrastructure are required in any developing area for the well-being of the local people as well as to ensure safety and security of the region. But in ecologically important areas such as the Western Ghats any construction activity shall be minimized to the possible extent and also ensure that such activities impose the least environmental burden, Over the years construction technologies have advanced much incorporating new generation materials and construction techniques. It has also resulted in reduction in material and energy intensity of construction. It is also possible to develop a green construction code of practice of this region.

Dams & Water Management

Dams are essential for flood control, irrigation and water preservation and generation of power. We may have to adopt a strategy of building dams fully

understanding the ecological issues on account of denudation, loss of forest etc. The environmental impact assessment may be carried out at every stage in the implementation of the project and take stock of the impact consequences before proceeding to further stages of development. Any proposal for hydroelectric projects shall be developed based on the evaluation and assessment of ecological flow of the rivers. Further development or expansion shall be undertaken only after understanding the post project environmental impacts of existing operations.

Power Projects

Electricity is essential for our day today life and that is why Governments –Central and State are very seriously initiating projects for rural electrification and adopting slogan such as "Power for all". The Western Ghats' region on account of its rain intensity natural taurine have given birth to a number of major and minor river streams most of them having perennial flow of water. Though every monsoon brings lot of water resources to this area bulk of it runs across the planes to the Arabian Sea in a shot span of a time. This situation offers much potential for hydro electrical power station consequently a number of dams have been constructed and hydroelectric power stations were put up. Even today only 25% of the total capability have been harnessed through the existing project. As regards technology for hydroelectric power generation has advanced to such an extent that no more dams are required and power is generated as run of river projects. There are several mini and micro-hydroelectric projects pending before Governments environmental clearance. In the context of habitat fragmentation in the Western Ghats, the Environmental Impact Assessments of these projects should be undertaken as per the consideration of Environmentally Sensitive Area (ESA) and Environmentally Sensitive Zone (ESZ) outlined in the WGEEP Report. During implementation of such projects

care shall be taken to be see that they cause little habitat damage through roads, power lines, and the dams. For larger projects, the post project environment impact of the first stage of the project may be studied in detail and analysed to ensure that no irreversible damage has occurred before taking up further stages. Medium size gas based power plants, wind and solar power plants may be put up in the region after having done a thorough impact assessment.

Mining and Minerals

Minerals are essentially required for various industrial, pharmaceutical and other requirements of modern life and hence mining of minerals cannot be abandoned at any cost. International experience as well as our own expertise in mining is capable of reorienting mining activities in ecologically sensitive areas towards a sustainable manner. We have to relook at the way mining is being carried out presently and henceforth adopt an environment friendly strategy with the least damage to the neighbouring ecosystems.

Extraction of Forest Produces

Forest is a valuable repository of renewable resources. The potential economic value of timber as well as non - timber forest products in terms of utilization or its market value is often underestimated. The challenge is therefore to assess and quantify the value of these products and to transform the use of many of them as are socially and ecologically viable from one of subsistence to one of development. Prudent felling of trees for timber extraction, and rational exploitation of non timber resources shall be our approach towards tapping these resources.

Industries

Industrial activity is important to any region in the sense that it empowers people to access better livelihood. Today, it is possible to redesign the operation and management of industries in a sustainable manner

incorporating all the specific requirements of the Ghats' region. Green industry developments of today offers ample scope for protecting communities, ecosystems and combating global climate from escalating environmental risks and emerging scarcities of natural resources. It transforms manufacturing and allied industry sectors and contributes more effectively to sustainable industrial development and has become the sector-strategy for the realization of green economy and green growth in the industry sector. The MSME activities in the Western Ghats shall be structured and developed on the above lines.

Tourism

The scenic beauty of the Western Ghats attracts large number of tourist on all seasons of the year. The influx of tourist put tremendous burden of the environment of the region by way of littering, solid and liquid effluents from apartments, hotels and noise endangering the tranquil of the forest region. It is understood that various state Government have successfully devised environment friendly tourism perspectives and implemented the same with the participation of the local community and tribal people.

Construction of Buildings & Structures

The ecological and environmental impact of construction of roads, highways etc. may have to be clearly understood before taking up the actual developmental process. Large scale construction activities and erection of permanent structures have to be avoided as far as possible. A specifically designed green building construction code may be developed for the region. Construction material shall be locally sourced and the aesthetic of the terrine shall be maintained. The provisions of the Forest Protection Act in this regard may have to be implemented meticulously. Development related engineering and technologies are advancing day by day with the absorption of more and more sustainability inputs and learning experience. It is

also possible to reliably predict the environmental impact of human activities with the support of modelling techniques and from lessons learned from past failures. Together with post project environmental impact assessment we are rendered capable not to cross the carrying capacity limits. On the whole, therefore, it is possible to carry out essential developments in the Western Ghats region ensuring comprehensive environmental protection within the purview of existing engineering knowledge, experience and legal framework.

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Mantra for Excellence is good thinking

I have not the slightest pretension to any of the qualifications relevant to the purposes of this Conference. Yet Sri Gopalakrishna Hegde, chairman of the Bangalore Chapter of the Institute of Company Secretaries of India and Kum. N. Bhagavathy, an enthusiastic student activist, have done me the honour of inaugurating this Conference – a favour which I prize highly while my knowledge of company secretaryship is rudimentary.

Merit

With the advent of liberalization, privatization and globalization, our corporate world is keeping pace with reforms. Corporate professional education, popularly called the three Cs, namely, Chartered Accountancy, Cost & Works Accountancy and Company Secretaryship, is also keeping pace with the changing

** Inaugural Address delivered at the Second State Level Students' Conference of the Bangalore Chapter of the Institute of Company Secretaries of India on 11th February, 2006.*

scenario. A very high place of distinction is due to the Institute of Company Secretaries of India which promotes and regulates the profession of company secretaryship. It may not be too much for me to say that the future of our economy, as of the world at large, belongs primarily to the corporate. The Institute helps you to acquire a unique but challenging professional qualification which will propel you to occupy the rightful place in the corporate world out of sheer dint of merit. As professionals you will be called to render competent service to managements in proper corporate governance with due regard to the interests of all the stake-holders. I take this opportunity to congratulate all the aspirants assembled here for having chosen to join the rank and file of prestigious company secretaries.

Personality

It is expected of you to play a reliable role in areas concerning accounts, audit and corporate governance. In order to justify the trust and confidence of society and government, you need to maintain absolute honesty and integrity. The future holds immense challenges to your profession particularly on the ethical front. While professional training and experience will help you to acquire skills like dignity, quality and independence, traits like honesty and integrity basically stem from a real personality. A harmonious growth of physical, mental, intellectual and spiritual dimensions is what constitutes a real personality. One must therefore strive for sound health, strong mind, pure intellect and spiritual growth simultaneously.

Traditional Values

Today there are many professionals who are great achievers but are unfortunately suffering from stress, competition, jealousy and psychological problems coupled with ailments like heart diseases and diabetes. On the other hand, there are many who are contented and happy but are not achievers. What is needed today is

a combination of these two qualities. One should be a great achiever and at the same time live a peaceful life. According to our tradition and culture, there is immense potential in the individual; Unfolding divinity is the purpose of work. Work is to be done with the spirit of 'Yagna' implying teamwork. Dexterity and excellence in action constitute what is called 'Yoga' or the spirit of work. Serving others is 'Seva'. Giving your best for the good of others is 'Tyaga'. Synchronizing private benefits with public benefits is the aim of work.

Good Thinking

The one and only mantra for excellence is good thinking. Benzamin Disraeli, the great philosopher once said 'Nurture great thoughts for you will never go higher than your thoughts'. Look at all the successful people in the world. What do they have in common? What is that one thing that separates those who go to the top and those who never get there? 'It is good thinking'. If you are willing to change your thinking you can change your feelings; if you can change your feelings you can change your actions; if you can change your action – based on good thinking – you can change your life. 'Knowledge is power', said Francis Bacon. But knowledge has value only in the hands of someone who has the ability to think well. You must learn how to think well and reach your potential. David Schwartz, the author of 'The Magic of Thinking Big says, 'Where success is concerned, people are not measured in inches and pounds or college degrees or family background; they are measured by the size of their thinking; becoming a better thinker is worth your effort because the way you think really impacts every aspect of your life. It doesn't matter who or what you are, good thinking will make you better".

Good thinking creates the foundation for good results. Poor thinking can produce only negative results. Good thinking produces some progress but great thinking produces great progress. You cannot change your

results without changing your thinking. Remember the adage, 'As you sow, so you reap'. If you need great results, you need to sow great thinking. Why do you think you fail short of achieving your complete dreams? It is because you are trying to change your results without changing your thinking. The best way you develop good thinking is by surrounding yourself with it. How can that be achieved? By reading literature replete with positive attitude, listening to talks that enhance positive thinking; keeping company of people who have developed the ability to think positive. Good thinking increases your potential. Each of us is a leader in someway, be it to our family, to our business, in our community, in our social environment, in our profession. For achieving excellence, you lead by the way you think, for, your thoughts will lead to actions. 'You will become as small as your controlling desire or as great as your dominant aspiration. You are that person as you think in your heart', says David Schwartz.

Mind-set

Your mind-set in the light of our tradition and culture should essentially be to produce performers than to produce results; manage yourself than to manage others; mobilize men and sound out other readiness than to organize men, material, money and machines; obtain agreement and commitment on means and ends than to plan and set goals; inspire and empower people than to praise and punish people; set personal example than to check, control and report; facilitate than to co-ordinate; sound out ideas than to instruct or order.

Integrity

All of you have a define aim to achieve. You must note one thing clearly – that achieving your objective is mainly dependent on the efficacy of the means you adopt. Means is an important as the aim. 'One of the greatest lessons that I learnt in my life is to pay as much attention to the means of work as to its end', says Swami Vivekananda.

What do we understand by 'means'? The method of work we adopt to reach our goal is means. As professionals, you will be called to report or certify after checking and verifying underlying facts and documents by observing prescribed standards so as to command total acceptance among users. You have to be within the legal parameters. Therefore, the means you need to adopt towards this end is absolute integrity

I sincerely hope that conferences of this kind will help you to actualize your potential. Having happily inaugurated this Conference, I request all of you to proceed to the work of this memorable session.

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Nurturing Human and Educational Excellence

HCL Education, Region Head, Karnataka Mr. Arif Dar,

HCL Education, Business Development Manager, Karnataka Mr. R Sugant, Students, friends, ladies & Gentlemen,

On the occasion of the inauguration of HCL Career Development Centre, Malleshwaram, it is indeed my privilege to offer my best wishes to the young learners for all the success in their professional and personal life.

Today the major concern of educationists and the industries is to device the process of teaching and learning in such a way that the graduates are not trained for yesterday's world but are equipped to face the emerging world in the next few decades of their active life.

** Inaugural address by Shri Wooday P. Krishna, Hon. General Secretary, Seshadripuram Educational Trust, at the inauguration of HCL Career Development Centre, Malleswaram, Bangalore, on 25th April, 2009.*

As you step into the professional world, equipped perhaps with a university degree, you would have many challenges to face. The challenges of steering your way through the professional life are formidable but not unmanageable. Considering the realities of professional responsibilities that you are expected to shoulder, it becomes necessary that you should have some special talents and capabilities beyond the syllabi. A reputed institution like HCL Career Developments Centre, driven by HCL's glorious track record of 59,000 professionals with three decades of history of inventions and innovations; besides presence in over 20 countries, I am sure, pays serious attention to real world problems of those who seek career development and prepares them to overcome them successfully. For over a century, the university education in India has gone through several drastic changes. Until a few decades ago, academic institutions depend upon a packaged set of knowledge and information organized around syllabi, textbooks and handbooks. Since private sector jobs were far fewer than the government jobs, the education and training were directed towards the responsibilities of public sector. It was a period of slow growth in scientific and technological disciplines and hence the pace of acquisition of new knowledge was also slow. Opportunities for post-graduate qualifications were very much limited. Career growth rate was extended over longer time period. Very few women opted for university education. Only those with substantial financial resources and the capacity for risk- taking started their own enterprises. The professional competition was by and large local or at best national and rarely international.

The graduates of tomorrow are expected to be far more creative and innovative, with greater need for self-learning than rely on syllabi and handbook. With explosive growth rate in sciences and technologies, some of the acquired knowledge will become obsolete.

Migration from one discipline to another will be seamless.

In the coming decades, the career opportunity in private sector will be much larger than in government but with much less job security and greater mobility than the past. A larger proportion of women will enter scientific and technical professions. The professional opportunities will be global and so will be the competition requiring competencies that are internationally recognized. They would have access to global knowledge base, available effortlessly, to meet the needs of life-long learning. Everyone would have to equip with sufficient skill to deal with new technologies and opportunities as they unfold rapidly. Career growth rate will be faster reaching peak level at much younger age than the past.

The rapidly changing professional scenarios require the young learners to be aware of their own talents, aptitude and preferences so that they are not carried away by popular clichés and end drifting in the winds of changes. Intelligent career guidance, group discussions and professional monitoring by mature knowledgeable person should be available to avoid disappointments and frustrations in later life. All need not look outside the national borders nor should they all flock towards a single professional market.

The global economy of the twenty-first century demands a set of new competencies, which includes problems solving, analytical skills, group learning, working in a team-based environment, and effective communication. Once required only of managers, these skills are now important for all workers. Fostering such skills requires an education system that is flexible, basic education should provide the foundation for learning, and secondary and tertiary education should develop core skills that encourage creative and critical thinking. In addition, it is necessary to develop an effective's

lifelong learning system to provide continuing education and skill upgrading to persons after they have left formal education in order to provide the changing skills necessary to be competitive in the new global economy. the desirable attributes for your future success are: breadth and depth of knowledge in the chosen field along with strong fundamental understanding of basic sciences and humanities; interdisciplinary knowledge; innovative, creative and problem solving abilities; intellectual honesty and professional ethics; capacity for team work in interdisciplinary and international environments; and ability to understand the society, culture and global processes.

India is increasingly becoming a top global innovator for high-tech products and services. Still, the country is underperforming relatives to its innovation potential with direct implications for long-term industrial competitiveness and economic growth. About 90 per cent of Indian workers are employed in the informal sector, and this sector is often characterized by underemployment as well as low productivity and low-skill activities. Although India has the benefit of a dynamic young population with more than half of the country's population under 25years of old-only 17 per cent of people in their mid-20s and older have a secondary education. To sustain rapid growth and help alleviation poverty, India needs to aggressively harness its innovation potential, relying on innovation-led, rapid and inclusive growth to achieve economic and social transformation.

Skills matter more than ever in today's more competitive global market. In India, where the vast majority of people are unskilled and uneducated, the capabilities of the majority of the population must be enhanced for the economy to show substantial improvements. Lack of emphasis on skill development is a major bottleneck in maximizing our innovation potential.

After receiving training at HCL Career Developments Centre, remember that your success to a large extent is due to the care and concern shown by your teachers at the various stages of learning and maturing, to inculcate in you the confidence to deal with your future career.

As you become successful innovators in whatever position you occupy, you should also remember your parents who reposed the confidence in you, made sacrifices to your educations and the society at large which contributed to your overall developments. Whatever wealth, intellectual and financial, you may generate you should have the temperament to share it for the benefit of the society.

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Revision of curriculum should enhance competitiveness

Curriculum is the backbone of any academic structure. It decides ultimately the human development. It should be essentially based on contemporary need.

In view of globalization of the economy, the need for well qualified and competent accountants and managers is felt. Curriculum development should invariably be inter-related with the development policies of the nation. Among the unemployed youth in India, graduates account for nearly 8%. Employability is the key factor that deserves immediate attention.

The weaknesses of our graduates are their inability to work in a team; lack of inter-disciplinary knowledge, Communication skills, creativity and practical

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Gist of talk delivered by Dr Wooday P. Krishna, Hon. General Secretary, Seshadripuram Educational Institutions, Bangalore, at the inauguration of one-day workshop on 'Restructuring and revision of syllabus of B.Com. And B.B.M. courses of Bangalore University', on 15-10-2009 organized by Seshadripuram college, Bangalore.

orientation. Colleges should not become clerk-producing factories but instead create leaders who can take on business independently however small or big they be.

The present educational system lacks industry-institution interaction with more emphasis on theory than practical application. The fresh graduates lack in contemporary knowledge. The system produces only mass but not the class. Evaluation of students has been on single examination.

The revision of curriculum should keep in mind international standards of curriculum. This is absolutely essential since after a certain period of the time, the demand for our graduates will be more throughout the world.

Curriculum cannot afford to ignore human values. Developing a deep understanding of human values and social ethics cannot be over-emphasised. Swami Vivekanand had rightly said, 'No nation can became great or achieve prosperity without its people developing a sense of self displine, social responsibility and co-operative work attitude'

Curriculum could be made effective by emphasizing on practical communication skills; encouraging project preparation, paper presentation and group discussion techniques to enhance the competitiveness of our young accountants and managers.

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Liberated Learning- for Transforming Lives

Director of Civil Defense and Director General of Police Smt. Jija Madhavan Harisingh, Chief Warden Civil Defense Karnataka Maj. Gen. T.M. John (retd), Indian Red Cross Society Karnataka State Branch Hon. Treasurer Sri Raju Chandrashekar.

Seshadripuram College Governing Council Chairman Sri M.S. Natraj, Seshadripuram College NSS officer Sri Pratap Lingaiah, Divisional Warden Lion Ajoy, Civil defense volunteers and friends, I am happy to inaugurate civil defense division-28 covering City central High grounds and Seshadripuram Police Station limits in the Bangalore City central police division. We are also observing the fire fighting week commencing today.

Imagine one working in an office on the 10th floor of an office complex and suddenly there was huge

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Address by Chief Guest Dr. Wooday P. Krishna, Member, Karnataka State Disaster Management authority, after inaugurating Civil Defence Division-28 at Seshadripuram College, Bangalore, 14th April, 2010

commotion, people running helter skelter and hues and cries all over, smoke spreading all over.

It takes some times to realize that it could be a fire break. Some would escape, some are trapped and some would be disparately trying to bail out of it. But all the occupants undergo a trauma beyond description. Such incidents are seen recently in two fire accidents. One in Bangalore in February 2010 and the other very recently in Kolkata. Precious lives are lost in these two fire accidents. Compare similar incidents in other countries, they may not be avoided. But the loss of life and property will surely be on lower side. Where is the difference?

1) Adequate provisions during construction stage shall be made not to hoodwink the authorities. But surely to ensure safety.

2) Regular maintenance of the system to keep them working. Even little amount of smoke emanates, fire alarms shall blow in a well maintained system. Smoke and fire detectors seldom work in our buildings. If they do, sufficient notice could be available to the inmates to escape, reducing casualties to a great extent.

3) Well established safety practices like mock drills are religiously conducted to make the occupants as to how to respond in a great extent and occupants get familiarized and well prepared to meet such eventuality.

4) Air-condition ducts are most vulnerable carries of the smoke and fire and the care taken in using proper material and methods and maintenance do contribute to minimize the adverse effects.

5) Building safety authorities are to be designated and enforcement of safety requirement shall be ensured by the govt. whether in govt. buildings or private buildings, particularly the high rise buildings. This is what happens in other countries.

National building code provides adequate provisions to ensure safety in buildings against fire. It is unfortunate that we are failing to adopt and implement them in practice. Thousands of lives could be saved every year only and if only we become conscious of the safety needs and focus our attention on its importance.

Let us look forward to better safety in our building against fire and save precious lives.

I congratulate lion Ajoy for the keen initiative and wish the new civil defense as intended success.

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TEACHERS- The Ambassadors of Transformation

Everywhere education and teachers are the ways of enabling individuals and nations alike to mee the ever increasing challenges. Teaching profession has undergone sea change.

Education system in India has moved from Gurukul system to Mc Casually system. But perception of society towards teachers did not change. Teachers are revered as ever.

Teaching profession has moved from "passion" to "profession". Despite technical advancement, teachers are not replaceable.

Teachers have become victims of "consumerism". Socrates said "I go to the market only to see what all things I do not require in life". Teaching talent is to be identified and nurtured from amongst students.

All information is available in plenty but what is missing is conceptual understanding. Students should be helped to become global citizens with opportunity-

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Gist of Talk delivered by Dr. Wooday P. Krishna, Hon. General Secretary, Seshadripuram Educational Institutions, Bangalore, at the inaugural function of 2-Day Taluk Level Teachers' Convention held at Badarikashrama, Madihalli, Turuvekere Taluk, Tumkur District on 10th September, 2011.

sensing minds. Learning should become a joyful process.

"Continuous Improvement" should be the goal.

In order to create inspiring learning, we should remove fear from the minds of students. We should not try to read the student's mind. If we want to know what students think, we must ask them.

Education being imparted now is only "bread-earning" education. This should be supplemented with "spiritual education". Only then education will become complete.

According to Swami Vivekananda's concept of education, we must help students develop moral character, concentration, and self-realisation. Education that helps them to stand on their own legs.

Mother tongue is better than foreign tongue. Education should integrate and not disintegrate the mind.

Qualities of good teachers. They should have three kinds of love:

(1) Love of Knowledge
(2) Love of Teaching
(3) Love of Students

Sri Ramakrishna said, "As long as I live so long do I learn".

Swami Vivekananda's Teachings applicable to teachers:

- Never be partial
- Never speak ill of others
- Do not find mistakes in others
- Quarreling and abusing each other are our national traits. Any one who wants to be my friend should give up these.
- Take care of these two things:
  (1) Love of Power
  (2) Jealousy
- Each work has to pass through these stages:
  (i) Ridicule;
  (ii) Opposition; then
  (iii) Acceptance
- Be positive; do not criticize others.

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Responsible Citizenship

Er. M. Michaelraj, Chairman, IEI, Tuticorin local centre, Dr.L.V. Muralikrishna Reddy, Chairman, organising committee, 26th Indian Engg. Congress, Dr. K. Gopalakrishna, Chairman, IEI, Karnataka State centre, Dr. J. Maheswaran, Principal, Dr. Sivanthi Aditanar College of Engineering, Tiruchendur, Er. G. Selvaraj, Hon, Secretary, IEI, Tuticorin local centre,

Friends, ladies and gentlemen,

I have great pleasure in participating in the 44th Engineers' Day Celebration and 151st Birth Anniversary celebrations of statesman Bharat Ratna Dr. Sir M. Visvesvaraya on the theme "Engineering Preparedness for Disaster Mitigation" organised by the Institution of Engineers (India), Tuticorin local centre, and Dr.

Address by Chief Guest Dr. Wooday P. Krishna, former Member, Karnataka State Disaster Management Authority and National Council Member, The Institution of Engineers (India) at the 44th Engineers' day celebration on the theme "Engineering Preparedness for Disaster Mitigation" organized by the Institution of Engineers (India), Tuticorin local centre on 20th September, 2011 at Dr. Sivanthi Aditanar College of Engineering, Tiruchendur.

Sivanyhi Aditanar college of Engineering, Triuchendur, which brings together engineers and resource persons from multiple disciplines with the objective of creating an awareness to advance and promote disaster risk reduction. My hearty congratulations to the Institution of Engineers (India), Tuticorin local Centre, and for their painstaking effort.

My personal thanks are due to Er.M.Michaelraj, chairman and members of the Institution of Engineers (India), Tuticorin local branch, for honoring me on such a momentous occasion.

The engineering fraternity is committed to assist vulnerably people in reducing risk and in preparing for effective response during disasters. The network of IEI with NGOs like the Rotary, Lions and Red Cross supplements and compliments the state effort in improving the lives of 'vulnerable people' and creating a more congenial climate for peace.

The people affected by disasters have urgent needs which must be assessed and addressed. To meet this need we need trained volunteers, effective response processes, adequate stocks, reliable communications, logistic and contingency plans.

South Asia is one of the most disaster prone regions in the world. Every year millions of people are affected by natural diasters. From 1987 to 2006, 24%of people killed worldwide by disasters that were in south Asia, and from 1999-2008 a total 1,023.081 people were killed and 2,278,965 people were affected in Asia. The increase in frequency and magnitude of disaster in South Asia over recent years has demonstrated the need to reduce underlying risk factor and to integrate Disaster Risk Reduction (DRR) strategies with climate change adaptation.

During the last decade, the number and sheer magnitude of mega disasters in the region has been

overwhelming such as the 1999 Orissa Super Cyclone, the 2001 Gujarath Earthquake, the 2004 Tsunami affecting India, Srilanka and Maldives, the 2005 Pakistan earthquake and the 2008 Kosi flooding in Bihar, India. Added to this, political and social unrest, open conflict, criminality, and insecurity in some countries add to impact and complexity of disasters in the region.

Within this context, India is one of the most disaster prone countries with a complexity of natural and human created disasters such as cyclones, earthquakes, drought, floods, endemic diseases, communal violence and civil unrest which is often aggravated due to poor Socio-Economic condition and lack of proper policy, planning, regulations and its advocacy.

The vision before us is a 'disaster resilient India'. We have to move from 'relief-centric' response to a proactive prevention, mitigation and preparedness driven approach. Further, we need to develop a holistic multi disaster oriented and technology driven strategy through a culture of prevention, mitigation, preparedness and response.

In the aftermath of Orissa super cyclone, the government of India created the high powered committee on disaster management. In October 2001, the committee issued a detailed report as well as a national disaster response plan. Falling under the responsibility of the ministry of agriculture's department of agriculture and cooperation, these two detailed documents conceptually, strategically and operationally map out how disaster management will be implemented in the country.

A key development has been the shift of disaster management from the ministry of agriculture to the ministry of home affairs set up the national disaster management authority (NDMA) to integrate the process of planning, coordinating and implementing measures

during disaster as per the provision of the disaster management act, 2005, passed by Parliament in 2005. Kerala was the first state to constitute the state disaster management authority in 2006 which was followed by other states including Gujarat, Orissa, Mizoram, Delhi, Andhra Pradesh and Karnataka in 2009, among others.

The state disaster management authority in Karnataka has put in place a state disaster management plan. According to the central act, the state plan must include the vulnerability of different parts of the state to different forms of disaster, measure to be adopted for prevention and mitigation of disaster, besides developing a road map for capacity building and preparedness measures. The plan specifies the roles and responsibilities of each department in responding to any disaster.

The guiding principles for the Plan are:

- Vulnerabilities of different parts of the state to different kinds of disasters;
- Measures to be adopted for prevention and mitigation of disasters;
- Manner in which mitigation measures shall be integrated with development plans and projects;
- Capacity building and preparedness measures to be taken;
- Roles and responsibilities of each department of the Government of the state in relation to the measures;
- Roles and responsibilities of each department of the Government of the state in responding to any threatening disaster situation or disaster; and
- Annual review and updation.

Appropriate provisions will have to be made by the state Governments for financing the measure to be carried out under the state plan. Copies of the state plan will have to be made available to the departments to draw up their own plans in accordance with the state plan.

The plan includes coordinating and monitoring mechanism which has reference to the role of elders; senior citizens and locally respected leaders, the role of NGOs; self-help groups and other community based organizations; role of women as active participants in disaster management including risk reduction, mitigation, preparedness and awareness generation; role of urban and rural local bodies particularly Gram Sabhas.

The plan takes into account socio-cultural realities and must be equity based recognizing the needs of marginalised groups such as elderly, pregnant and lactating mothers, children, and physically and mentally challenged persons. The plan includes training needs, role of emergency operation centres, medical preparedness, mass causality management, outline various life-line structures like bridges, roads, school, buildings, hospitals, communications and network etc. and highlights the arrangements for maintenance of these structures during disasters. To take steps to strengthen civil defense and home guards, identify geographic information system (GIS), convergence of the existing national, state, district and local resources, address logistic issues, incorporate modalities for inter-state coordination and the like.

Since disasters do not reorganize man-made boundaries, inter-state, inter-district coordination issues will have to be factored into the plan.

The Disaster Management Act, 2005, mandates the constitution of a state disaster response fund at the state level and district disaster response fund at the district level. The training, capacity building and other proactive measures will essentially include the role of the NCC, NSS, NYK, educational institutions, civil societies, corporate entities, fire brigades, civil police, media and the like. Specific action plan will have to be drawn out for floods, cyclone, earthquakes, landslides, chemical

disasters, nuclear disasters, biological disasters, mine disasters, tsunami and the like.

Strategic direction towards reducing impact of disasters would be

- To build safer communities with enhanced resilience and capacities of people at risk of disasters and their vulnerability reduced in the targeted geographical areas.
- Strengthen national disaster preparedness and response mechanism at various levels for effective response.
- Capacity building at all levels to deliver disaster risk reduction mandate.
- Improved inter-agency coordination at various levels

Disaster education is another major area which requires urgent attention. We need to include disaster management curricula in the higher and technical education besides agriculture and medical fields.

In our journey to realize the vision of disaster resilient India, we need to the holistic and inclusive in our approach never ignoring the human side of disaster management.

Every year on an average 50 lakh people die in the world due to disasters, natural and man-made. What is needed today is sensitizing the community towards mitigation. Way back in 2000, USA brought the disaster mitigation bill. The draft of the bill was prepared after wide consultations at the country level keeping in mind the potential hazards within the region. In our country, we introduced the disaster management bill in 2005 as a sequel to Tsunami in December 2004. Mere provisions in the statute books will not hold the key to disaster mitigation.

Disaster mitigation process has its telling effect on reducing vulnerability of future damages, promote public participation, protect economic health, and guide post- disaster recovery, promote co-operation, preserve healthy and safety. Mitigation means to cause to become less harsh or hostile. Mitigation emphasizes planning for disaster they occur. The mitigation plan necessarily implies the use of accounts for the risk to and the capabilities of the individual communities. The mitigation implies cooperation between state and local authorities promoting them to work together. Mitigation should be cost-effective and environmentally sound. This in turn can reduce enormous cost of disasters of the property owners and all levels of government. Mitigation can minimize community disruption. Examples of mitigation include land use planning, adoption of building codes and elevation of homes, or acquisition or re-location of homes away from flood plains. Engineers have great role to play in the mitigation process. Engineers will have to make use of indigenous and locally developed appropriate technologies to a great extent.

Mitigation yields benefits to society and therefore it creates safer communities by reducing loss of life and property. It enables individuals to recover more rapidly from floods and other disasters. It lessens the financial impact on the state and communities. Mitigation is the key to decreasing the time it takes to re-build and recover after disasters. By using existing, proven plans and building standards, mitigation allows individuals and communities to lessen post- disaster disruption and re-build more quickly. Long term hazard mitigation planning and projects enable communities and individuals to break the cycle of disaster damage, reconstruction and repeated loss. Mitigation saves money and is cost effective.

In 1997, the Red river flooded 8600 homes in North Dakota, causing 3.7 million dollars in flood losses. The

state of North Dakota, local governments bought out 700 of the most vulnerable homes in the state. The Red river flooded again after 9 years in 2006 yet losses were kept to 6.5 million dollars as a result of mitigation projects and studies.

Engineer statesman Sir M. Visvesvaraya believed in the practice of self-help and team work. He also believed in maintaining efficient standards in all that we think and do. Above all, he persuaded everyone to think in terms of the nation. On this auspicious occasion of 44th Engineers' day, we would be paying our humble tribute to this Great Engineer, if only we can demonstrate our preparedness and ingenuity as engineers in mitigating disasters thereby contributing our mite to the betterment of the lives of our vulnerable people.

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Innovate or Perish

Good evening my dear fellow engineers respected council member and other senior corporate members, ladies and gentlemen!.

I am extremely happy to be amidst you this evening and feel greatly honored to deliver this maiden address as chairman of the Institution of Engineers (India), Karnataka State Centre. Today's globalized economy has resulted in fierce competition in every field. "industrialize or perish", is the old school of thought, whereas the LPG (liberalization, privatization and globalization) environment has forced every one of us to "innovate!" this is applicable to products, capital goods, health care services or any engineering product right from pin to plane including sophisticated high end-high tech product every organization needs to be creative and ensure continuous improvement, every now and then. Innovations in every sphere of life, led to the developments in our day to day life over the ages.

I wish to bring to your kind attention that we engineers need to play a greater professional role in social life and will be very successful by properly orienting our thought process along with innovation and creativity. We are in a great country, where pizza arrives in 30 minutes, whereas the ambulance does not; more mobile phones and toilets; car loans are cheaper than education loans; one side food grain rot as people die of hunger on the other side every time, immediately after the allocation of flood relief fund-allocation of drought relief; when the selling prices are fixed by every other manufacturers in this great country the poor farmers in villages are unable to fix their selling prices for their own agricultural products.

People who commit petty crimes are handcuffed and treated badly whereas persons indulging in crimes involving rupees worth hundreds of crores are proportionately treated with all the comforts when they are in custody; when the government is able to fix the auto fares it is unable to fix the cost of life saving drugs in this country. In this back ground, we engineers have a greater and better opportunity ever before, to use our creativity and innovative skills.

Every crisis and problem always brings an associated opportunity to provide solutions for them.

Our knowledge, professional expertise and concern for better life standards for majority of people can be addressed collectively by coming together and evolving comprehensive recommendations to our policy makers. Let us all have a creative union of our brains and have a think tank for evolving alternate policies for the betterment of the common man, which in turn will provide abundant opportunity for wealth generation and employment for the masses. We have great role models in front of us such as engineer state man Bharat Ratna Sir M. Visvesvarya and Dr. Verghese Kurien. Dr. Kurien, a mechanical engineer, who lead successful white

revolution- a unique innovation- in social life made the Indian villages to have little prosperity in such a way as to earn their livelihoods through the cooperative dairy movement. He was considered as a father of white revolution. We have seen the greater contributions of innovative engineers who were in majority in the then cabinet of chairman Mao in the then China which accelerated their nation building process which resulted in today's modern China.

In our contemporary political scenario, we have witnessed how Er. Nitish Kumar was successful in taking Bihar on developmental path which was also widely acknowledged by people of Bihar through their popular mandate in his favour.

We, as an engineer, can pick up lessons from the history of modern China and can easily bench-mark ourselves and redefine the role of Engineers in the current seenario of our country and IEI! Let us revisit the reset happenings in China in this regard.

Contemporary China is a nation led by technocrats. In fact, China is new governed more and more by men who trained in higher education in Science and Engineering field. full-fledged technocratic leadership is firmly established in Chinese politics. During the past two decades, however three successive generations of this technocratic leadership in China, specifically described as 'the Engineers-Turned-Politicians,' have promoted the national economic growth and led to modernisation. The current generation of the leader is made up mostly of graduates from some of China's leading universities, typically trained in science and engineering... Until 17th national congress of the Communist Party of China (CPC), every members of the central bastion of Power the standing committee of the politburo- was an engineer by training. President Hu Jintao is a graduate Beijing' Tsinghua University, often referred to as China's MIT. For those in the west where

lawyers dominate the political establishment, China provides an intriguing contrast. China's technocratic leaders have invested heavily in science and technology, emphasize education and supported the remarkable infrastructure development of the past two decades. They have thrown their weight behind massive engineering projects... the technocratic orientation of China's leaders also shows through in their wider approach to policy-making. The vision of strong and prosperous China built on specific and technological capabilities is sure to be shared by the next generation of China's leaders but they are unlikely to be cut from quite the same technocratic cloth as the current leadership. For much of the history of the people republic china's best and brightest to be serve nation through science and engineering.

Standing committee (SC) and politburo (PB) is the most power ful and exclusive leadership group in China. 75% of the 16th PB hold the professional title of engineer or senior engineer and hold college degrees. All SC members are engineers. This is an importance evidence for the existence of technocrats in the current leadership of the CPC. Most members have obtained their college degrees from China's top engineering universities such as Qinghua University, or the most prestigious polytechnic universities in China. In 2002, the age range of all members of PB was from 55 to 67.

We have our historical pride which has demonstrated the ability, technical skills, managerial excellence of our ancestors and were demonstrated by our Indian civilization which can be witnessed by seeing the giant temples, monuments built by our fore fathers in general and for example, ancient Indian king from Tamil Nadu, Raja Raja Chola, who was the first Indian ruler to establish the first naval fleet in nearly 900 years back and conquered Sri Lanka, Java, Sumatra Islands in South East Asia, parts of Malaysia, Myanmar, Brunei Islands and some Islands belonging to Australia even

Tasmania, New Zealand. Even his son Rajandre Chola also has the honour of establishing the first Indian merchant naval fleet. He transformed the naval fleet of his father in to merchant naval fleet and there by established trade from India to South East Asia, China and even Romans. Not only that, Cholas built the great Tanjore temple 1000 years back and even the first to construct dam which is still intact and serving the farmers of this region.

They are the first to introduce election process for electing representatives for governance of local administration. We are no way inferior to rest of the world. Even today, the latest "Intel" chips are designed at heart of Bangalore with the help of our brightest young girls and boys from our engineering colleges. But unfortunately, we do not have single facility to manufacture those chips in India. Similarly, our country with 121 crore people out of which 79.28% have mobile phones, i.e.. 96 crore +, whereas, in USA: 32+ crore is the second largest in the world next to China. Unfortunately there is no single popular brand of mobile phone which is "made in China"!? It is also true in the case of computers, minters, TVs etc! Here, there is great scope to reverse this trend. IEI can play a pivotal role by collectively applying our enlighted vision and wisdom in this regard, which needs to be supported with appropriate political wisdom and concern for common man should be basis in our approach. It should not be derived from the interest group who is constantly lobbying for western interest and neo-colonial exploitation of our people and resources. If these trends continue, we need one more freedom movement to protect the interest of our common people from the crude exploitation of multi-national and transnational companies.

The last century marked the beginning of Atomic age and Space age. The developments in science in the last few decades have had tremendous impact on

engineering. Developments in semiconductor materials and other continuous innovations enabled development of miniaturized Bio medical devices saving the lives of millions. The wise decision of Akio morita, the founder of world famous Sony Company in Japan to buy the patent for this gave him unique lead in making products of international market at affordable cost but high quality. Subsequent developments in the field effect transistors paved the way for Semiconductor Logic Circuits enabled the computers to shrink and the personal computer developed by IBM unleashed successive and successful developments to make powerful personal computers displacing the gaint main frame computers occupying large areas and consuming high power. The revolution in computers led to "democratization"of information and knowledge next only to follow the revolution unleaded by the printing press invented by Gutenberg. Today super computers with trillions billion of floating point operations are accessed by engineers to solve complex problems in structural engineering, automobile and air craft design and analysis the experimental data analysis. The birth of internet, a marriage between computers and communications has transformed the way human interaction takes place on 24x7 bases. Time and Distance have been conquered by communication system broadening all continents by cable, fiber optic links and space communications ably assisted by a global network supported by computers. New business models have more in to being and thus will continue to be so for the coming decades in this century. Academic institutions and places of higher learning such as universities are expected to create new knowledge through innovation and creativity which in turn will add greater wealth, prosperity and value for those institutions and our nation. The popular innovations such as MP3 and MP4 formats are the outcome of student products in Germany at Fraunhofer University.

A new dawn has occurred in biology again assisted by electronic and computing advances, sophisticated electronic instrumentation and process equipments. The Human Genome has been decoded by experimental and theoretical work. The genome mapping has become an enabling tool to diagnose disease causing gene disorders for coming out with customized medicines. The gene sorting machine was built with inputs from semiconductor industry in Silicon Valley. Plants and animals are being characterized in many countries of the world now. Now a day, Revolutionary break through innovations are taking place in border areas of science, engineering & technology and also out of inter-disciplinary and multi-disciplinary and multi-disciplinary research efforts.

The revolutions coming through marrying biology and chemical engineering, which is paving the way for new medicines, process chemicals, food products and environmental pollution mitigating products. We should be happy to note that stem cells are being studied for making biocompatible spares for individuals using biotechnology tools. DNA sequencing is also playing critical role in forensic science. Micro array based analytical tools have again been made possible by combining semiconductor technology and biotechnology.

Yet another breakthrough in material science has led to Nano Technology, here single atoms are manipulated by advanced tools. Carbon Nanotube is one exciting product. It is akin to graphite but differently arranged. Very high speed transistor 300times faster than current ones, efficient batteries, fuel cells and solar cells are few likely end products. Combining nano technology and biology, Nano-biotechnology is emerging as a new field.

The increasing world population likely to touch 6 billion plus, reducing land area for cultivation and environmental pollution are making researchers to go in

for better yielding crops despite global warming Crop scientists are pressed to apply latest findings and in all this, the role of irrigation engineers is of great importance. Effective water management is holding the key to survival in future. The raging debates on small versus big dams, rain water harnessing and rejuvenation tanks which were the back bone of agriculture in India are to be scientifically approached for the common good of the community at large by engineers. innovation is possible here also.

New means of transport are being advocated mono rail, elevated highways and all electric vehicles. These hinges on advanced magnetic materials, super conducting materials and light weight materials like composites. This is a big challenge for the engineering community.

At this point it is worth pondering over the power scenario in our country. We have installed capacity of 1, 60, 000 mw but not fully operational. Our need is three fold 400,000 mw. Coal based thermal plants are our main stay supported by hydel and to small extent by nuclear, wind and solar power plants. The problems of environmental pollution and high cost for nuclear and high upfront cost of renewable sources of energy makes the tasks of engineering community very difficult. Pro-development and anti-development lobbies are at work but the engineer has to deliver concrete results at the shortest possible time and minimum cost.

Innovation alone can help us to achieve this! I firmly believe that, IEI will play its historical role in the present scenario and provide thought leadership for the country!

I wish to remind you all that the institution of engineers (India) is a result of vision of great engineers during the early twentieth century. IEI established in 1920 was granted royal charter in 1935. The royal charter bestows statutory authority and responsibilities for promotion of science, practice and business of

engineering in all disciplines, education and certifying competency of engineers. It is one of the largest multi disciplinary body of engineers having 15 engineering divisions and interdisciplinary panels besides six for a including, national design and research forum (NDRF) engineering staff college in India. It is the largest professional body of engineers with more than 7 lakhs of members spread over more than 100 centres. IEI was the first professional body to provide unique opportunity for working professionals to upgrade themselves by completing associate membership (AMIE) Examinations which is equivalent of BE/Btech degrees. Vivwesvaraya Technological University (VTU) has the pride of granting approved research centre status to NDRF, one of the leading interdisciplinary forums of the institution of engineers (India). Its activities encompass promoting research and development activities in emerging technology and the country. It was ongoing multi institutional, multi disciplinary research programmers with overall formulation, coordination and monitoring role in areas like micro air vehicles, chemicals and biosensor, unmanned underwater vehicles, etc.

The institution of engineers (India), Karnataka state centre, pro actively supports and nurtures the various initiatives of NDRF, such setting up a proto lab where researchers and students can undertake rapid prototyping of new products. Advanced simulation facilities using supercomputing are planned for carrying out modeling and simulation of aerospace, mechanical, chemical, biological and nano material science problems. A bird strike research group is formed at NDRF to prevent loss of life and aircraft. NDRF is having collaborative with academic and research institutions in India and abroad. NDRF is also administering the prestigious national student design awards in all 15 engineering disciplines and also the national design awards in 7 disciplines annually which benefits engineering students and AMIE students across the

country. IEI and NDRF support various R&D projects through collaborative research funding and student projects in a fitting way.

My dear engineers, we shall not forget that, IEI was the first professional body to regulate the profession of V and the first organization which as done the accreditation of engineering colleges since 1935. AMIE qualification offered by IEI was approved by the ministry of human resource development, government of India, as equivalent to bachelor's degree in appropriate branch of engineering from recognized Indian universities. AMIE is the smart way of upgrading oneself either for employment or for higher studies. It is the most cost effective and productive way of upgrading one's qualification and competency in a shortest possible time.

Let me conclude on how a 21st century engineer should be in the words of Joseph Bordagna of US national science foundation : "21st century engineers will need to be astute makers, trusted innovators, agents of change, master integrators, enterprise enables, technology stewards and knowledge handlers. They should be able to handle Terra scale, Nano scale, complexity, cognition and holism aspects of emerging science and technology and pave the way for an integrated design field far beyond what is imaginable with today's technology".

On this let us re-dedicate our self to make India an economic superpower by lasting engineering achievements through structured innovative approach in all our endeavors!

My grateful thanks to the distinguished past president of IEI from Karnataka Padmashri Dr. H.C. Visvesvaraya and prof. Dr. M.P. Chowdiah for being a source of inspiration to me. I also thank our past chairmen Er. D.V. Nagabhushan and Dr. L.V. Muralikrishna Reddy, immediate past chairman Dr. K. Gopalakrishnan, for their patronage and support, my

council colleagues, members of the state centre committee who have reposed confidence in me and elected me unanimously as chairman. My special thanks to all the corporate members of IEI for giving me an opportunity to share my thoughts on this august occasion of 78th annual general body meeting of the Karnataka State Centre.

I conclude by saying that: "innovation and technology holds the key for progress and development in knowledge economy!" our dear institution will continue to strive hard to bring laurels to the nation. Thank you one and all!

Reference:

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Address by : Dr. Wooday P. Krishna, FIE, Chairman, The Institution of Engineering (India), Karnataka State Centre on 8th December, 2012 at Sir M.V. Auditorium, The Institution of Engineers, Karnataka State Centre 3, Dr. B. R. Ambedkar Veedhi, Bangalore-560001

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An Insight into Super-critical Technology – Concept to Commissioning

Er. A. V. Krishnan, Executive Director, BHEL, Tiruchirapalli; Dr. S. Sundarrajan, Director, National Institute of Technology, Tiruchirapalli; Er. P. Nagamanickam, Chairman, IEI, Tiruchirapalli Local Centre; Er. R. Kumar, Past Chairman, IEI, Tiruchirapalli Local Centre; Er. E. S. Salai Kuberan, Hon. Secretary, IEI, Tiruchirapalli Local Centre; Distinguished Members of the Mechanical Engineering Division Board; Members of the Organizing Committee; Invited Speakers, Paper Presenters, Awardees, Corporate Members of the Institution, Invites and Fellow Engineers.

The Institution of Engineers (India) established in 1920 was granted Royal Charter in 1935 by His Excellency George V., King of England. It has grown from strength to strength over the period and has established 106 State / Local Centres located at all the State Capitals and important locations. IEI functions among professional engineers, academicians and research workers. It provides a vast array of technical,

professional and supporting services to the Government, Industries, Academia and the Engineering fraternity.

In order to fulfil its basic objective through synthesizing an amalgam of academic and practical expertise, the Institution has grouped its members into fifteen Engineering Divisions such as Aerospace, Agriculture, Architecture, Civil, Chemical Computer, Electrical, Electronics & Telecommunication, Environmental, Mechanical, Metallurgy & Material Science, Marine, Mining, Production and Textile Engineering Divisions.

These Divisions have the mandate to devote their efforts, individually or jointly with one or more other Divisions towards search for new knowledge and product technologies within their respective or an inter-disciplinary domain. These Divisions are directed to take active steps to establish a close liaison between the Institution, its members and the policy makers.

In order to broaden and strengthen the services of the Institution to the technical community and to the public as well, these Divisions are also directed to actively encourage research and developmental programmes through various promotional aids, such as Lectures. Seminars, Symposia, Workshops and other educational programmes of the like and also the publications aimed at the dissemination of research results, in addition to extending technical consultancy and advisory expertise.

The Institution for the purpose of achieving the objectives enumerated under the Royal Charter, in addition to providing an opportunity for the engineers at various platforms for dissemination and exchange of knowledge, has also established the following Fora:

Engineering Staff College of India (ESCI) at Hyderabad in 1981 for providing continuing education; National Design and Research Forum (NDRF) at Bangalore in 1980 to encourage design talents in engineering and technology; Rural Development Forum

(RDF) at Kolkata in 1980 to encourage and promote multifaceted development of rural India; Water management Forum (WMF) at Ahmedabad in 1986 to promote and advance the engineering and practice of water resources managements in its totality; Safety and Quality Forum (SQF) to address the aspect of safety and quality in engineering profession; the Sustainable Development Forum (SDF) for expression of authoritative views on technologies for sustainable development and for enunciating practical solutions to the problems faced by India.

IEI has been closely associating and interacting with a number of other sister organizations of specialized nature and has established bilateral relationship with several professional bodies of different countries. It is founder member of World Federation of Engineering Organizations (WFEO), Commonwealth Engineers' Council (CEC), World Mining Congress (WMC), World Energy Council (WEC), and other International Professional Bodies.

'India will become a Developed Nation' by the year 2020. Our Former President, Dr. APJ Abdul Kalam has set forth this agenda for the entire Nation. To fulfill this dream, it is imperative that every discipline covering all facets of science and technology sets their priorities and ensures periodic stocktaking its strengths and weaknesses. This objective can only be achieved if concerned professionals come forward in clusters, meet on a common platform and interact effectively. The Institution of Engineers (India) provides such a platform by holding separate National Conventions in each branch of engineering every year. National Convention is a mega national event of the Institution which will be hosted in different parts of the country through its State or Local Centres.

This year's 29th National Convention of Mechanical Engineers is being hosted by Tiruchirapalli Local Centre and the theme for discussion is "An Insight into Super-critical Technology – Concept to Commissioning".

On behalf of the Mechanical Engineering Division Board (MCDB) of The Institution of Engineers (India) and the Organizing Committee, it is my great honour and pleasure to welcome you to this Convention. The Convention covers a National Seminar, Memorial Lecture, State-of-the-art Lecture, Key-note Lectures and Felicitation of Eminent Engineers for their contribution in the field, etcetera.

I am happy to mention here that Dr. S.C. Bhattacharyya Memorial Lecture will be delivered by Dr. S. Sundararajan, Director, National Institute of Technology, Trichy and Dr. S. P. Luthra Memorial Lecture will be delivered by Dr. S. Sekar, Executive Director, Corporate R&D, BHEL, Hyderabad.

Several specialists holding key positions in industries have contributed papers for discussion at various technical sessions of the Convention.

The overwhelming response to our call-for-papers indicates the popularity of the theme identified for discussion at this Convention and confirms that IEI's Mechanical Engineering Division Board has become the world-wide forum for all aspects of advances in technology in the field of Mechanical Engineering related topics.

I would like to express my thanks to all authors for their outstanding contributions and in particular the members of all the Committees for their contribution to organize this spectacular event.

During the Convention the participants not only have excellent discussions and exchanges on the technical challenges of Mechanical Engineering, particularly on the theme, but also issues on how to collaborate on advanced areas of Mechanical Engineering will be addressed. I am sure that we will have an excellent presentations which will provide sound information on technological components, technological progress in the field of Mechanical Engineering.

I wish to thank all the authors, invited speakers, session Chairmen, members of the Board, Awardees and numerous others who helped to shape the content of this Convention.

I am confident, you can look forward to thought-provoking and enlightening lectures by eminent personalities during these two days of the Convention.

I am sure, the Convention Proceedings will serve as a comprehensive compilation of the present knowledge and experience and will be of benefit to engineers, scientists, students, who are concerned with the subjects presented at the Convention.

As Chairman of the Mechanical Engineering Division Board, I would like to share my thoughts on how we could strengthen Mechanical Engineering as a Discipline, to contribute to nation-building. I believe this is an important topic, as many of the participants would be looking at growing their careers over the next 20-25 years.

According to a study conducted by the American Society of Mechanical Engineers, in the US, 'Mechanical engineering will evolve and collaborate as a global profession over the next 20 years through a shared vision to develop engineering solutions that foster a cleaner, healthier, safer and sustainable world'.

Mechanical engineers are fortunate to be in a position to participate in all programs of technological importance. Mechanical engineers have been at the forefront of conventional and alternative energy industries. This is because they have the knowledge and skills to design new energy sources, make energy sources cleaner, and improve the relevance of current and emerging technologies.

Mechanical engineers can lead multi-disciplinary engineering teams to improve the quality of life for the human population by developing new solutions and

technologies for protecting the environment, improving farming and food production techniques, developing affordable housing and sanitation solutions, developing mass transit transportation solutions, improving delivery of affordable healthcare, and delivering clean drinking water to all citizens. While striving to offer engineering excellence to their fellow citizens, Mechanical engineers are fortunate to have the luxury to develop on the body of knowledge and vast experience of the previous generations.

The India growth story presents an opportunity for all of us to contribute effectively in developing technologies to promote sustainable development by identifying new cleaner technologies. It will also give us an opportunity to participate in developing new social systems to promote equitable growth across all sections of society.

To do this, Mechanical engineers will need to develop new knowledge and skills to implement the systems-engineering approaches across multi-scale systems, and work as members of inter-disciplinary teams. New simulation software designed to simulate the properties of complex systems will help mechanical engineers anticipate system requirements and predict outcomes.

You will need to develop expertise in foundational tools and techniques, such as 3-D CAD, computational fluid dynamics, finite element analysis, life cycle analysis and project management, as these are likely to be the future engines of growth.

To be effective in the coming years, Fellow engineers will require additional competencies and skills outside the offerings in current degree programs. It is also necessary to develop a mind-set that promotes Continued Professional Education, and Multi-Disciplinary and Systems Approach to Problem Solving to deliver results.

Because of the rapid rate of change in the development of new scientific discoveries and technological breakthroughs, the current curricula of universities and professional societies are inadequate to nurture globally competent engineers and engineering leaders. It is important to teach and deliver learning strategies that will be effective in teaching young people basic technical knowledge and help in acquiring higher order thinking skills to innovatively solve problems.

The pace of technical development cannot be sustained by any one country, engineering discipline or profession alone. The complexity of advanced technologies require engineers, scientists, sociologists, economists and other professionals to collaborate in developing multi-disciplinary solutions. Mechanical engineering must be at the forefront of implementing systems-engineering approaches in developing engineering solutions.

I have shared my thoughts on what we will need to do as an Engineering Discipline to be an effective team player in developing engineering solutions. I would like you all to deliberate on these and come up with a road map on how we could translate this into a working methodology to address national issues.

Presidential Address delivered by Dr. Wooday P. Krishna, FIE, Chairman, Mechanical Engineering Division Board, The Institution of Engineers (India), at the 29th National Convention of Mechanical Engineers held at National Institute of Technology, Trichy, on 6th September, 2013.

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Challenges Before Technologists

As chairman of the Institution of Engineer (India), Karnataka State I am happy to be in the midst of domain experts from different fields of Engineering, Technology and Sciences, to discuss about sustainability at the Indian Sustainability Congress-2014.

The spurt in the population and the exponential increases in the utilization of natural resources have resulted in the demand for energy, storage and utilization becoming a major challenge facing the engineering community today. Today's engineers are likely to find exciting career opportunities with significant growth potential in the energy and sustainability areas.

The role of mechanical engineering is to design and manufacture products, solutions and system that will improve the quality of life for the citizen while adhering to the relevant safety standards. Engineers and technologists in mechanical, industry, and manufacturing disciplines will have a unique

opportunity to deploy interdisciplinary domain knowledge to design and implement products, solutions, and systems using optimum resources to subsequent generations to innovate and enhance their standards of living and quality of life.

Engineers and technologists have to address humongous challenges in the coming years-develop new technologies, products, solutions, and systems that will promote sustainability. These measures coupled with process innovations would help the global population make optimum use of land, water, minerals, and other natural resources with reduced emissions. I am confident that mechanical engineers will raise to the occasion and adress these challenges associated with the transformation of the society from an extracting and consuming system to the society that is renewing and restorative in nature. In a fixed economy like India, it is essential to promote, develop and commercialize sustainable technologies that address complex challenges impacting the environment, water, energy and materials.

The Institution of Engineers (India) which is the largest professional body of engineers promoting all engineering disciplines is in a position to contribute significantly to inter disciplinary research by developing new technologies, tools, processes, and best practices to solve complex environmental challenges. IEI looks forward to engaging with practitioners to take forward viable ideas for further R&D and productization through its for a like the national design and research forum, engineering staff college of India, and sustainable development forum.

Speeach delivered by Dr. Wooday P. Krishna at the inaugural of Indian Sustainatility Congress, 2014, Bangalore, 4th March, 2014

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Green Technologies in Power Sector

Shri Mata Prasad Pandey, Hon'ble Speaker, Legislative Assembly, Uttar Pradesh, Er. V. B. Singh, Chairman, The Institution of Engineers (India), Uttar Pradesh State Centre, Prof. Onkar Singh, Hon'ble Vice Chancellor, Madan Mohan Malaviya University of Technology, Gorakhpur and Convenor of the Convention; Dr. D. K. Singh, Co-Convenor, Dr. S. K. Srivastava, Organizing Secretary; Er. J. S. Mishra, Honorary Secretary, The Institution of Engineers (India), Uttar Pradesh State Centre; Distinguished Members of the Mechanical Engineering Division Board of IEI; Members of the Organizing Committee; Invited Speakers, Paper Presenters, Eminent Engineer Awardees, Corporate Members of the Institution, Invites and Fellow Engineers!

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by holding separate National Conventions in each branch of engineering every year. National Convention is a mega national event of the Institution which will be hosted in different parts of the country through its State or Local Centres.

This year's 30th National Convention of Mechanical Engineers is being hosted by the Uttar Pradesh State Centre and the theme for discussion is "Green Technology in Power Sector".

On behalf of the Mechanical Engineering Division Board (MCDB) of The Institution of Engineers (India) and the Organizing Committee, it is my great honour and pleasure to welcome you to this Convention. The Convention covers a National Seminar, Memorial Lecture, State-of-the-art Lecture, Key-note Lectures and Felicitation of Eminent Engineers for their contribution in the field, et cetera.

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Analysis of India's Power Sector

Electrical Power is considered to be the most crucial infrastructure input and has a significant influence on the economic growth and prosperity of the country. As per the estimates of the Ministry of Power, Government of India, Media and Industry Analyst Reports on India's Power Sector, India's power production stands at 1,006 Terawatt-hour (TWh), making India the fifth largest producer and consumer of electricity in the world. The power generation has grown more than 100 times since 1947, the demand growth has been significantly higher due to the rapid growth of the Indian economy.

Renewable energy is receiving the importance it deserves, and capacity addition of 30GW are contemplated by 2019 to meet the ever-increasing energy demand. As per industry estimates, wind energy is expected to contribute about 20 GW, with the contribution of solar energy being around 10 GW.

With many infrastructure projects lined up by the Government of India and in the Public-Private

partnership mode, the demand for electrical power is expected to grow at about 10-12 percent till about 2016-2017.

Analyses by the Ministry of Power show that about 54 per cent of India's energy demand is addressed through the conventional fossil fuels-coal reserves. The contribution through gas reserves is at about 14 per cent. The Government of India has unveiled the National Solar Mission program to generate 20 GW by 2020. Renewable energy contribution stands at about 12 per cent. India has significant potential for hydroelectricity with the 12th Five Year Plan (2012-2017) scheduled to add about 20 GW of hydroelectric power. Hydropower's contribution is at about 18 per cent, with nuclear energy delivering about 2 per cent.

Green Technologies-Transition from Fossil Fuels to New and Renewable Energy

The concerns on global warming have brought to the forefront, debate, and research on sustainable development. When we talk of sustainability, we are articulating the need to manage wastes, ensure production of energy at affordable costs, and build a viable framework for energy security.

Most of the electricity generated today is from fossil fuels-coal, oil and gas, and the demand for coal and oil is likely to increase substantially in the coming years. This will result in the increase in emissions. There is an economic cost to remedying environmental effects as has been highlighted in the numerous debates on climate change. The contribution of new (nuclear) and renewable (hydro-, wind, and solar) sources to the energy mix is minimal.

Recognizing the complexity and intertwined nature of India's largely fossil-fuel based energy portfolio, an integrated response by enterprise, government, society, and the research communities is essential to manage and reduce carbon dioxide emissions. Organizations of

professional engineers including the American Society of Mechanical Engineers have recommended that policy frameworks be developed to manage emissions by-

- Setting progressive, mandatory targets to minimize emissions by all sectors including power generation, transmission, distribution, industrial and residential entities in a time-bound manner
- Promote investments in applied R&D to develop efficient and cost-effective renewable energy technologies, green energy systems and processes
- Ensure skill up-gradation of the workforce in contemporary energy technologies and their deployment.

As India is a growing economy, Indian engineers will have the opportunity to demonstrate their prowess and expertise in pursuing development while controlling the issue of gaseous emissions. This can only happen if India makes the transition from low-efficiency technologies to those that generate fewer emissions and are more efficient.

One of the contemporary technologies that is being evaluated and researched worldwide is concentrating solar power (CSP) systems that deploy the sun's heat, instead of burning fossil fuels to boil water and generate steam that spins turbines to drive electric generators. Experts and luminaries from multiple disciplines of engineering at IEI should support engineers working on developing these cutting-edge technologies by evolving standards and guidelines to induct these technologies for societal applications.

Energy-Efficient Industry

It is possible to adopt sustainability by improving energy efficiency and using less energy-intensive raw materials.

Industry should evaluate the feasibility of making processes more energy-efficient, improving process-control systems, optimizing energy use through recovering waste heat from processes. Banks and Financing Institutions should come forward to support the financing of these industry-upgrade programs, and minimize the costs incurred by industry and employees during cases of plant shutdown to upgrade the factories.

Using recycled raw materials can also help slash energy costs. Replacing clinker with fly ash or blast furnace slag will help reduce the energy consumption during cement production. These raw materials are by-products of other industrial processes, and hence do not require extra energy to produce. Compare this with using clinker that requires burning coal and generates carbon dioxide.

Government Support

There is significant impetus in terms of awareness, financial support through Government of India schemes and R&D initiatives to promote green technologies in the power sector. The Government has stipulated that low-interest-bearing funds are to be sanctioned from the National Clean Energy Fund (NCEF) for on-lending to viable renewable energy infrastructure projects.

Conclusion

The engineering fraternity has a significant opportunity to participate in applied R&D, technology adoption and induction of green technologies in the power sector to meet the requirements of enhanced power generation essential for India's economic growth and prosperity. I am confident that the engineering fraternity gathered here will deliberate these new technologies, in the context of the opportunities for inducting these technologies, and arrive at standards and guidelines to induct these technologies for societal applications.

I have shared my thoughts on what we will need to do as an Engineering Discipline to be an effective team player in developing engineering solutions. I would like you all to deliberate on these and come up with a road map on how we could translate this into a working methodology to address national issues.

Presidential Address delivered by Dr. W. P. Krishna at 30th National Convention of Mechanical Engineers, Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh on 27 - 28 September, 2014.

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Leadership Effectiveness

NITTE University Chancellor Dr. N. Vinaya Hegde, Director Dr. K. Devaraj, Members of the Faculty, distinguished guests, delegates, invites and friends!

Hundred sheep led by one lion is far more effective than hundred lions led by one sheep. This, in short, would be my Key Note on the theme of the Conference.

Leadership effectiveness is the most observed and least understood phenomena on the earth. It is difficult to define leadership effectiveness in its entirety. Hence Conferences of this kind needs to be held so that the full meaning of leadership effectiveness could be understood and practiced by all those who value leadership.

Let us now quickly bring before us a grand picture of present day India. We have a healthy financial system with over 300 billion foreign exchange reserve. We have over 3,000 rivers and rivulets with 24 Agro-climatic zones. We have huge mineral deposits and precious forest products. We have the world's largest technical

manpower. We have a very high tourism potential. We have 121 crore population of which nearly 65% comprise of youth. We have been focusing on trade, savings, production, infrastructure development and the like. 30,000 out of 80,000 doctors in U.K. are Indians. 12% scientists and 38% doctors in U.S. are Indians. 40% scientists in NASA are Indians. Despite all these, we have failed to build human resources required for nation-building. It is unfortunate that the world's largest democracy does not have a single leader acceptable to 121 crore population. Time has therefore come for us to see a paradigm shift from 'Leader Worship' to 'Service Worship'.

Our National Ideals, according to Swami Vivekananda, are Service and Sacrifice. Leadership in our context essentially means 'Service and Sacrifice.' We remember men not for their power, position or wealth but for the work they do during their life time. It is in this backdrop, that I say that every dedicated Indian should endeavour to become a leader in his own right and the best form of leadership would be through service and sacrifice.

One quality of leader that makes him remarkable is his ability to influence others.

Jesus Christ who seton a mission to spread the message of the Kingdom of God came across a fisherman. In his interaction with him, Jesus remarked "come, I will teach you how to fish men". Puzzled by this strange statement he gave up everything to join Jesus Christ in his mission and thus became the first follower of Jesus Christ known to the world as St.John.Mahatma Gandhi met Acharya J. B. Kriplani, a great historian at the Banaras Hindu University. Mahatma Gandhi in a close interaction with Kriplani remarked: 'you have read history; written history; taught history; come; let's create history'. Kriplani was so much inspired that he gave up his professorship at the university and joined the national freedom struggle with complete dedication.

Speaking on Leadership Effectiveness, my mind naturally goes to the father of our nation Mahatma Gandhi whom Joab, a British Philosopher, described as a 'moral genius'. Mahatma Gandhi on his return from South Africa 100 years ago wanted to build a just social order based on truth and non-violence and with this objective in mind he decided to fight against poverty. The strategies he evolved were unique. He epitomised the common man of India. His was the most transparent life always ready to forgive and forget. He was one in thought, word and deed. He truly lived up to his own dictum of 'be the change you wish to see in the world'. Barack Obama said 'Mahatma Gandhi is a hero not just to India but to the world'. It must be noted that the Mahatma Gandhi was not a Harvard graduate in Management; not so good looking; not a brilliant orator; did not know all the languages of India. He took his political mentor Gopalakrishna Gokhale's words seriously and travelled all over the country for a year before he set himself to the task of serving the people of India. Gokhale said: 'Go to the people, love them, live among them, learn from them.' This transformed Gandhiji and made him understand India better. The five hard tasks Gandhiji undertook distinguished himself as an outstanding leader:

- Return love for hate
- Include the excluded
- Forgive without apology
- To be able to admit mistakes
- To be simple without hypocrisy

Gandhiji's quality of Transcendental Spirituality, an attribute with inner conviction that something or someone beyond self and the material world exists and makes life complete and meaningful, and is expressed by religiousness, interconnectedness, sense of mission and wholeness. Gandhi's life was driven by his religion, truth and non-violence and a life of service to others. The

effectiveness of Gandhi's leadership can be seen in the world's largest democracy winning freedom without shedding a drop of blood. In the 1920s an American journalist asked Gandhi what the biggest problem was that India faced at the time. The journalist expected Gandhi to say that the problems were slavery and British rule or pervasive poverty. But Gandhi said the biggest challenge facing the country was "callousness of intellectuals." He was not just thinking about getting independence but about building a sustainable society. He is hailed as one of the greatest Asians of the 20th century.

Lord Macaulay, who introduced English education in India, was an outstanding leader in the eyes of the British. In his speech on February 2, 1835 in British Parliament, he said:

"I have traveled across the length and breadth of India and I have not seen one person who is a thief. Such wealth I have seen in this country, such high moral values, people of such caliber, that I do not think we would ever conquer this country, unless we break the very backbone of this nation, which is her spiritual and cultural heritage, and therefore, I propose that we replace her old and ancient education system, her culture, for if the Indians think that all that is foreign and English is good and greater than their own, they will lose their self-esteem, their native self-culture and they will become what we want them, a truly dominated nation."

The strategies that he evolved were to replace India's ancient education system with his own by which he successfully managed to produce large-scale clerical-minded educated class in India. He was effective in making India a truly dominated nation. Even his leadership has been so effective that after almost two centuries we have still not been able to replace the education system established by him.

Swami Vivekananda, a youth icon of this country, lived for just 39 years. In his last ten years of life he was able to impact 50% of world population through his speeches and writings. Swamiji demonstrated outstanding leadership by establishing the unique Ramakrishna Math and Mission which is the most credible and transparent socio-spiritual organisation in the country with over 100 years standing. The motto of the organization is Serve God in Man. Swami Vivekananda said that my mission is man-making. He gave utmost importance to the development of Man. He gave a new dimension to the institution of Sanyasa. The basic principles on which he founded the Ramakrishna Math and Mission are even today are so relevant.

(1) Not caste – based
(2) No politics
(3) No newspaper humbug
(4) Women's wing to be separate
(5) Transparency in accounting
(6) Shun praises
(7) Unselfish work

Swami Vivekananda himself an outstanding leader spoke eloquently about leadership in the following words:

'It is very difficult to take the role of a leader – one must be Daasasya Daasa: - a servant of servants – and must accommodate a thousand minds. There must not be a shade of jealousy or selfishness, then you are a leader'.

An epic personality who demonstrated outstanding leadership was Hanuman. Lord Rama enlisted his services as his ambassador because he was most trustworthy. Lord Hanuman knew 'what to speak, how to speak and when to speak'.

In Arthasastra, Kautilya while listing the duties of a king, wrote, "In the happiness of his subjects lies his

happiness; in their welfare his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects he shall consider as good". Rabindranath Tagore, the Nobel Laureate for Literature, said philosophically: 'I slept and dreamt that life was joy. I awoke and saw that life is service. I acted and behold, service was joy.'

In our own times, we have seen the impact of Sir M. Visvesvaraya's leadership in the development of our nation. His strategies were team work; to maintain standards; to restrict imports; to set up Indian industries; to encourage production and services. He valued time, discipline and systematic work. He believed that a person who is neat in his dress can be clean and straight in his life. He was a great institution builder. He was instrumental in establishing the Krishna Raja Sagar Dam, Bhadravathi Iron and Steel Works, State Bank of Mysore, The University of Mysore, Federation of Karnataka Chamber of Commerce & Industry, The University Visvesvaraya College of Engineering, Kannada Sahitya Parishat, Public Libraries, Hydro Electric Project (Jog Falls), Mysore Soaps and Detergents, and the like. Sir M. Visvesvaraya always thought in terms of the nation and he urged all his associates and colleagues to think and act institutionally.

Innovative leadership according to me is 'to think and to do things differently' and 'to see what everyone has seen but think what no one has ever thought of'.

Take the case of Ratan Tata who thought of a Nano Car affordable by even the middle class.

Well-known business house Firodias asked Arun Firodia who had graduated as a Mechanical Engineer from the U.K. in the late 60s to design a Moped affordable by the common man and the result was the famous Luna Moped which was sold at the price of Rs.1,000 in the early 1970s.

We cannot forget the thought leadership given by Dhirubhai Ambani who dreamt of a call at the cost of a post card.

Jack Welsh of General Electric evolved a new strategy of leadership 'Lead, Not Manage'. This thought has made the corporate world sit up and think. To him, the word management was something negative. He advocated leadership because he found all positivity and creativity in leadership.

On the humanitarian side, we cannot forget Mother Teresa who impacted the lives of the neglected and the suffering.

How can we forget Anna Hazare, a great social activist who awakened the Indian masses against corruption in the recent times. His leadership was successful only because he was one in thought, word and deed.

We can never forget the outstanding leadership of Dr. S. Ramegowda, Principal of Bangalore Institute of Technology who introduced for the first time in the early 1980s undergraduate programme in Computer Science and whose pioneering effort was stiffly opposed. He had to face the Justice Gopi Vallabh Iyengar Commission for having ventured to start a course which in those times was thought scandalous. It was believed that only institutions like the Indian Institute of Science could offer such programmes. In fact, but for his pioneering effort in promoting IT education, IT industry could not have taken off in a big way in the early 1990s.

'People will respect you for what you represent'.

Pope John Paul is a shining example of this kind of leadership.

'Reaching out to the community'. This is what is represented by Dr.Veerendra Heggade who reached micro finance to lakhs of women through self-help groups in Karnataka.

Pandit Jawaharlal Nehru is a great symbol of sacrifice. He was a lawyer who gave up all luxuries in the service of the people. He served as the first Prime Minister of India for 17 long years and very few know that he was imprisoned during the freedom movement for 18 long years.

Sharu S. Ranganekar, a great management guru, once said that his mother provided him the leadership on his first day in school. His mother who used to console him for weeping did not heed to his crying once they reached the threshold of the classroom. 'Giving what one needs and not what one wants is the sign of a great leader'.

'If the rate of change in the market place exceeds the rate of change in the organisation, the end is in sight'.

There is at least one point in the history of any organisation when you have to change drastically to rise to the next performance level. Miss that moment and you start to decline. Here leadership counts. 30 years from now even big universities and organisations will become relics, if change is not affected.

Former IIT Professor Dr. B.V.A. Rao who is credited with 'change management' at Vellore Institute of Technology replaced all the heads of departments in six months and grew the institution to such a level in ten years that it had students from over 40 countries on its campus.

I would like to share some of my thoughts on institution-building since institution-building and leadership are closely connected.

Prior to 1991, that is the pre-liberalization-privatization-globalization era, we were product-oriented but today we are customer-oriented. Detection was order of the day but prevention is of the order of today. Operations were being emphasised then but what is emphasised today is systems. Quality control

was a department but today quality concerns everyone. Managers were important then but today teams are more important. The terminologies plan, assign, control and enforce were the order of the day then whereas delegate, coach, facilitate, mentor are the terminologies of today. Natural resources defined power then but knowledge is power today. Leaders commanded and controlled in those days but today leaders empower and coach. Shareholders came first in those days but today customers come first. Production determined availability but today quality determines demand. Everyone was a competitor but today everyone is a customer. Value was extra in those days but value is everything today. We had quality systems approach in those days whereas we have quality process approach today.

To be effective leaders we need to develop the ability to see the larger picture and not be carried away by short term happenings. We must stand on our own beliefs. We must not only believe in team work but also be good team players. We must never react but learn to respond. We should be able to manage contradictions; see power in delegation. Time management should be our priority. We should know our range of work and when to relax. We must learn to blame ourselves if something goes wrong. If we cannot find a way, we must be ready to make one. We can never afford to postpone a decision. We need to develop a good sense of humour for only a happy person can make others happy.

Those who aspire to reach positions of leadership need to be aware of weaknesses to be avoided as listed in verses 65 to 67 of Valmiki Ramayana, Ayodhya Khanda Chapter-100. Sri Rama alerts his brother Bharatha to 14 such possible weaknesses and they are:

1. Lack of faith in moral order
2. Lying especially out of greed
3. Anger

4. Neglect of duties
5. Procrastination or delaying tactics
6. Lack of integration with the wise
7. Sloth
8. Falling for the temptations of the senses
9. Unilateral thinking and acting, taking decisions without advice from right people
10. Taking advice from wrong people
11. Not launching the projects that have been decided upon
12. Not keeping confidentiality
13. Not utilizing auspicious traditions, systems and practices
14. Picking up fights with all and sundry

I thank one and all for your patient hearing.

Key Note Address delivered at the National Conference on 'Leadership Effectiveness' organized by Shri Dharmasthala Manjunatheshwara Post Graduate Centre for Management Studies and Research, Mangaluru, 13-2-2015.

Multi-faceted educationist

Statements like, "You can't do everything" and "How much can one man do?" have now become cliches. But, we have come to believe the truth in these statements. That is, until people like Mr W P Krishna prove us wrong.

To describe the man in a sentence is difficult, but a fine blend of a technocrat, educationist and humanist sums up his muilt-faceted interests and activities.

An engineer by profession, Mr Krishna holds university degrees in diverse subjects such as Law, Business Administration, Sociology and Journalism. He is also a social worker associated with various non-profit institutions such as the Indian Red Cross Society, Bramho Samaj and Gandhi Peace Foundation, to just name a few. Born into a family of revolutionary leaders and freedom fighters, Mr. Krishna has been interested in doing his bit for society since childhood.

His education at Ramkrishna Vidyashala, Mysore exposed him to the ideals of Swami Vivekananda. It was

through the influence of Swami Vivekananda, that he became interested in the field of education.

Mr. Krishna says, "Swami Vivekananda said that education was the only remedy to many of the nation's problems, and I wanted to do my bit for the country through education."

Mr Krishna is the Honorary Secretary of the Seshadripuram Group of Educational Institutions. Speaking of the Seshadripuram Educational Trust, he says, "The trust was started as a primary school by a group of women in 1930 as "Seshadripuram Stree Samaja". We have come a long way from there. Today, we have 20 educational institutions offering diverse courses and about twenty thousand students. This is a public charitable trust; that is to say it is run by philanthropic contributions from education enthusiasts. We don't function on a return on investment basis. The trust aims at providing quality education to people from every stratum of the society."

The founder of Bramo Samaj, Raja Rammohan Roy has been another inspiring figure in his life. He says, "Today people are talking of secularism and politicising the issue. But, Raja Rammohan Roy spoke of secularism in the 19th century. He said if the nation had to progress, people of all faiths had to come together."

Being an educationist, what is his grouse with our system? What does he see as the biggest problem with the educational system of the country? "Commercialisation", is the instant reply. "Education has been a charitable act in our past. Our culture and heritage have never thought of education as a commodity. But today, commercialisation is reducing the quality of education imparted", he says.

Mr Krishna has an important message for parents. He says, "Parents must not enforce their views on career

their children the Parents should not govern the selection of a course of study. The joy in learning will be lost if students are forced to study subjects they are not interested in."

To students, he says, "This is the age of competition, but to achieve great heights, it is essential to achieve core competence."

SAVITHA SURESH
Media Catalyst Features
(Deccan Herald, 2-9-2004)

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Working on Vivekananda's Ideals

EDUCATION may have become commercialised, but there are still some visionaries who hold education sacred and are on a mission of taking it to all. Wooday P. Krishna is one among those who has retained the sancity of education. Educated at Ramakrishna Vidyashala in Mysore, he was inspired by Swami Vivekananda's ideals and decided to carry on with the mission. "Swami Vivekananda said education was the only remedy to many of the nation's problems. I wanted to do my bit for the country through education," he says.

Krishna is the Secretary of Seshadripuram Group of Educational Institutions and runs 20 institutes offering diverse courses. The group will very soon venture beyond Bangalore and will set up schools, in Mandya and Mysore districts.

Krishna says that his institutes are focused more on imbibing values in young mind. "The foundation of our institutes is on the virtues of perseverance, dedication, and commitment," he says. The institute was founded by

two women. They started the first school in a tiled house, 1930. It helped the children around the area. "We try to instill an attitude of service of these great women in our students," he says. Surprisingly, for this, they not only hold classes for students, but also for teachers. "We believe that teachers should be role models. So, we hold sessions and workshops for, we hold sessions and workshops for teachers. Training teachers is more important than training students, as students watch the teachers closely and learn from their lives. A teacher's personal life is not private, but it influences several students around him or her," he says. Apart from the lessons and computer classes, the institutes also try to mould the students' personalities. "We hold several extra curricular activities and boost our students' talents," he adds. The fees of the institutes are minimal, so as to help all. It is run by the donations from philanthropists "Our school may not be choice of parents; for whom status in society is of utmost importance. But ambience attracts students, and they tell their parents that they want to be a part of our institutes," he adds.

Krishna is a multi-faceted personality and is a technocrat and social activist as well. He is actively involved with several NGOs, including the Indian Red Cross Society, Gandhi Peace Foundation and Brahmo Samaj. He is also a recipient of the Rajyotsava Award, in 2004, for social service.

Savie Karnel
(The New Indian Express, 1-2-2006)

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Brahmo ideals more relevant now

Face to face

WOODAY P KRISHNA

'At a time when there are conflicts over languages, when regionalism is raising its ugly head, organisations like Brahmo Samaj, Arya Samaj, Ram Krishna Mission act as shock absorbers.'

The leading luminaries of Pre-Independence Era including scientist Dr. Praful Chandra Roy, Swami Vivekananda, Mahatma Gandhi, Dwarkanath Tagore were associated with Brahmo Samaj, which is called Prarthana Samaj, in Maharashtra and Gujarat. Mamatma Gandhi, a member of Ahmedabad Prarthana Samaj, attended prayers regularly. Samaj held its first All India Annual Conference at Dhaka in Bangladesh in 1890, which continued to be held there till 1912. On 18th Saturday october 2008, the 118th Conference of Samaj began at Indore, Wooday P. Krishna (45), the

acting President of Central Council of Brahmo Samaj, which is the supervisory body of all the centres, spoke to Padma Shastri about challenges faced by the Samaj. Excerpts

Most organisations face dearth of youth to carryforward their mission. Is Brahmo Samaj any different?

It's a historical organisation founded by great social reformer Raja Ram Mohan Roy. I have inherited his ideals from my family. The problem is that young members of Brahmo families don't take part in Samaj activities. We'll be deliberating on this issue during at the annual conference.

Have you drawn a specific plan to draw youth to the samaj?

Its ideals are lofty enough to impress young, educated people. We're looking for fresh approach to make them appreciate Brahmo movement like woman empowerment, education of poor and communal harmony. We're thinking of replacing monotonous prayers. We want to enliven our speeches, Sunday's divine service. The idea is not to draw youth from outside Samaj. It's to make a beginning from home wherein young members of Brahmo families need to be involved despite their busy schedules. There is a need to consolidate what the Samaj already has.

Do you think Brahmo movement changes to keep pace with modern times?

Its ideals are more relevant than before. People from different religious Persuasions can feel at home at Brahmo Samaj. At a time when there are conflicts over languages, when regionalism is raising its ugly head, organisations like Brahmo Samaj, Arya Samaj, Ramkrishna Mission act as shock absorbers. They neutralise the divisive forces. We have people from different cultural backgrounds, speaking different

languages coming together to pray one God. Modern world needs a religion, which is a highest common factor and least common multiple of all religions. Brahmo Samaj does that. We want make people from diverse backgrounds feel at home.

How many centres does Brahmo Samaj have at present?

It has 125 centres across the globe including one in London and another in Bangaladesh. Together, there are 5000 members approximately. Most centres are located in West Bengal followed by Andhra Pradesh and Karnataka. We have Himalay Brahmo Samaj at Srinagar in Jammu and Kashmir. Ram Mohan Roy seminary at Patna is a reputed educational institute.

Do you face problems running the centre in Bangladesh?

There have been certain diffulties but we are very few in number and we don't teach any specific religion. So it's functioning.

(Hindustan Times, Indor, 18-10-2008)

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Keeping pace

Our Institutions are Islands of Excellence

Seshadripuram Educational Trust (SET) is one of the oldest educational managements in the country and the city of Bangalore. SET is a symbol of emergent and independent India, symbolising the ambitions and aspirations of the free nation, its sense of dedication and spirit of sacrifice which permeated the freedom movement. Dr Wooday P. Krishna, General Secretary, Seshadripuram Educational Trust speaks to city express about the trust, the college and its future plans.

- **While there are many colleges and educational trusts in the city, according to you, what are the unique features of SET and its colleges?**

SET has humble beginnings; but right from the start, it was imbued with a vision and mission. The organisation began with thirteen children, but over the years, it grew steadfastly to its present stature as a global conglomerate of premier educational institutions, with 26 institutions employing over 1,000 employees and educating over 20,000 students. Our vision is rooted in

tradition, but it is keeping pace with changing trends in the educational scenario, facing new challenges and setting and meeting higher benchmarks.

Seshadripuram College is committed to the highest standards of academic excellence and value based education. Its ambiance inspires learning. Diverse opportunities are provided for learner's self expression and empowerment- be it classroom interactions, co-curricular or extracurricular activities, sports, social service, humanitarian initiatives, NSS, NCC etc.

- **Do you have exchange programmes?**

In the recent months SET and its institutions have been expanding its activities overseas. Students and Faculty Exchange Programmes have been initiated with Grimsby Institute in the U.K., University of Central Oklahoma and Oklahoma State University in the USA. There is a steady exchange of students and faculties to and from these universities. SET's colleges are now on the global educational map, recognised as centres of excellence in education and research. Students from many countries find SET colleges congenial for pursuing higher education – African and South Asian countries.

- **What are the main Courses offered?**

Arts, Science, Humanities, Social Science, Commerce and Management – we offer courses in all the areas. We are at par with the recent developments in Life Sciences, Information Technology and Computing, Biotechnology, Genetics, Computer Science etc.

Plans for introducing new Postgraduate Courses are on the anvil.

- **How would you rate higher education in the state?**

Higher Education in the country, in Karnataka and in Bangalore are at cross roads. One-third of the country's population is of the college going age. This fact alone

poses a humongous problem and a daunting challenge for educational planners.

Facilities, opportunities and avenues have to measure up to this enormous demand. In the present feverish scramble for higher education, it is a challenge to maintain quality. The poser is: how to provide world-class education to the ever growing number of aspirants? Universities and colleges have grown by leaps and bounds, but the sad fact stares in our face: not a single Indian university figures any where in a list of the top 200universities across the world! The scenario has been aptly described as Islands of Excellence in a sea of mediocrity"by the Prime Minister.

- **How has SET played a role in enhancing quality of education?**

SET institutions are 'Islands of Excellence', standing testimony to quality higher education. We have demonstrated that it is possible to provide quality higher education to large number of students in all our institutions, the fee structure is affordable. The income generated is ploughed back into developing the institutions and their infrastructure and teaching-learning resources. The state as a provider of higher education has woefully failed.

The task of providing a higher education to the swelling millions of aspirants is daunting but the budgetary provisions are in commensurate. Hence government colleges and state universities fail to attract the best teaching talent. The result: teaching positions in universities and colleges remain vacant for years. We have no dearth of faculty because we have created a conductive working ambiance in our institutions and we are able to attract qualified and committed people to work.

Indian express, city express,
Tuesday, 27 November 2012

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An interview

Dr. Wooday P Krishna was born in the year 1963, in a family of freedom fighters. After receiving his early education at Sri Ramakrishna Vidyashala, Mysore, he graduated with Degrees in Engineering and Law. Later, he pursued his Doctorate in Business Administration. A Consulting Engineer by Profession, he specializes in valuation of industrial assets and arbitration. A man of values, he seeks inspiration from Swami Vivekananda and George Bernard Shaw. His various positions include the Hon. General Secretary (SET); Member (State Disaster Management Authority, Govt. of Karnataka); Chairman (KSC, the institution of engineers, India) and former Hon. Treasurer (Bharath Seva Dal). He has been bestowed with several esteemed awards and honours including the state Rajyostava award for Social Service, 2004, Eminent Engineer Award, 2011, Red Cross Award for Outstanding humanitarian Work, 2005, fellowship of the IET, UK. He comes with an experience and expertise of 25+ years Techno-legal Consultancy, Engineering Inspection and Certification, Arbitration, Appraisal of Machinery and

Plant, Disaster Management and Educational Administration.

He is a fellow of the Institution of Engineers (India), India Institute of Safety and Environment among others. He is also a renowned member of the society of Automotive Engineers, Indian Society of Heating, Refrigerating & Air Conditioning Engineers, Indian Institute of Plant Engineers, Indian Society for Technical Education, Indian Institution of Industrial Engineering. His motto has been to serve the humanity in the best of his abilities. Dr. Wooday P Krishna is a rare blend of a technologist, educationist, social activist and above all, a humanist.

Here is an excerpt of the interview conducted by the students of SICM.

1. ***Tell us more about your family.***

   Both my father and my uncle were freedom fighters. My grandfather was a founder member of the Congress party of the princely state of Mysore. He was a legislator and a leading public man of Bangalore.

2. ***The most memorable time of your life?***

   The most memorable time of my life would be my high school days at Sri Rama Krishna Vidyashala, Mysore.

3. ***Where did you do your schooling, degree and further education?***

   I began my schooling at Poorna Prajna Education Centre, Sadhashivnagar and continued in Ram Krishna Vidyashala, a reputed institute in Mysore and I did my Pre University from M.E.S College.

4. ***Tell us more about Rama Krishna Ashram.***

   The Ashram emphasizes Vivekananda's ideals. Seshadripuram Educational Trust maintains the same motto and ideologies. We aim at producing

socially productive citizens. The real formation of my mind began there, at Rama Krishna Ashram.

5. ***What are your hobbies?***

I would read anything and everything under the sun. I like to visit various tourist places as I am adventurous too.

6. ***How would you define yourself ?***

Im' basically an engineer, social activist and educationist.

7. ***What is life according to you?***

Life is something which you don't know who your parents were going to be. We all came here by chance. The little time between birth and death is called life. You have to live it.

8. ***What are your beliefs?***

I feel or rather I believe in living for one another.

9. ***What is your idea about happiness?***

At the end of each day, happiness is when you have a sound and a guilt-free sleep.

10. ***What is your greatest fear?***

I don't fear anyone or anything. If you stick to the truth, you will never be touched by fear.

11. ***Do you admire yourself for being what you are?***

I try to assess myself rather than admiring. Admiration heightens ego.

12. ***What is your greatest achievement?***

I honestly feel I have been instrumental in bringing about some changes in the lives of the needy and this is my greatest achievement.

13. ***What is your motto and your greatest virture?***

I have no motto for myself, but I admire the motto of

Ramkrishna Ashram which says that in the long run, for development of one's soul, one should simultaneously serve the society. To be a human being by itself is a great virtue.

14. What is your treasured possession?

My treasured possession is love and regard from my teacher, parents, family and institution and definitely not my bank balance.

15. Given chance, who would you like to be? And if you could change one thing about yourself, what would it be?

I want to be myself only. God has designed each of them with their own unique quality. Neither do I wish to be replaced nor do I want to copy. Change is permanent and needed as I believe in continuous improvement.

16. How can one build character?

One builds character primarily through education. He must learn culture from parents and know his family and societal values and responsibilities.

17. Do you believe in God?

I believe in God. I see him in everything. We need to feel him. God is the supreme spirit which exists.

18. Is your success because of luck or hard work?

Both. Hard work and luck go hand in hand. You need to have God's grace, co-operation, the blessing of your elders and the community. On the other hand, working hard to be successful gives you satisfaction.

19. What does service mean to you?

Service is an unselfish work. Serving the world gives you a lot of satisfaction and enhances your spirituality.

20. *What are your thoughts on time?*

To define anything you need two dimensions time and space, without which there is no meaning. Our culture says KAALAYA THASMAYE NAMAHA (all the things are born out of time). We should pay lot of attention to time because we know that it waits for none. Hence we should make best use of our time. God has made each of us unique and he who makes the best use of our time, will be a great use of achiever. Take the example of Shankaracharya. He lived only for 32 years but look at how well he utilised his time to achieve so much. It is not the span of time that matters, it is the quality of time utilized that matters. How you use your time reflects on your personality. It is the greatest worldly possession.

21. *Best qualities a leader should posses?*

A leader should be a good follower too. Obedience is the quality a leader must have.

22. *How did you begin your career?*

I started my career as a teacher in BMS College of Engineering. After 2-3 years, I decided to move to Consultancy in Engineering, Inspection and Certification.

23. *A book that has inspired you which you would recommend to your students?*

Swami Vivekananda changed my whole attitude towards life. I want my students or youngsters, in general to read about him. This country lacks LEADERS.

24. *What would you like to tell your students? What are your expectations from a student apart from academics?*

There is a well-known saying by a German Scholar "Young people, instead of seeking praises, should

aim at becoming praise worthy". Never go behind recorgnition. I simply want my students to be good human beings. Education is the greatest assest of our country. All students must be socially productive.

25. What are your future planes for SET?

SET is 83 years old. Two ladies have sown the seed and today it has grown into a huge tree with many branches and leaves. We have set up over 26 institutions with more than 20,000 students. I appreciate the philosophy of our institution as it is non-commercial. We follow the beliefs of Swami Vivekananda. SET aims at and believes in "man making". For any developing country the greatest resource would be HUMAN RESOURCE. We aim at providing and improving human values through various programs and shaping the attitude and perception of young minds. If you are a teacher, be the best teacher in the institution. If you are a manager, be the best manager of your company. If you are a common man, be the best man. All of this is possible if you strive towards being a better human being.

26. What makes you honorary and honourable?

My service is to the institution and the society. How far I am honourable is something to be decided by others.

27. Do you find any major difference between students then and now?

I don't find any difference as such because life is a process of change. As and when society changes, even people have to. Learn to accept that change rather than complaining about it.

28. Given a chance, how would like to change the education system?

In a democratic country like ours, it is not possible for one man to change the system overnight. Each individual needs to strive towards it. Our culture is known for Guru shishya parampara, I find this value diminishing. According to me "Replacing a system is always bad engineering, one should always re- engineer".

29. In general, are educational institutions a business or social responsibility?

Basically in India, education is charity based because its value adding and value providing, because of LPG programme. It's not just the industrial and manufacturing business which has undergone revolution, but to an extent the educational institutions too have been commercialised.

30. Being a social activist, do you think our fight for Independence has been in vain?

Gandhiji did't want India to be the number one nation in the world. His main intention was to help the weakest and poorest individuals lead a decent and good life. Our struggle for independence is not in vain but incomplete.

31. Given a chance to serve the nation, what position would you like to take?

If our aim is to serve the nation, then we do not require any position. Willingness to serve is important. Why do we need positions? An honest worker does not need any position.

32. How do you feel about the prestigious Rajyotsava award being given to you?

I feel that the State is with me in all my endeavors.

33. May we know your reason for joining "Karnataka State Disaster Management Authority"?

I was the chief of Red Cross society (Karnataka) during 2004 tsunami. We took up the Tsunami Relief Operation. SET contributed 6 lakhs and we systematically took up the rehabilitation work. In the 2008 North Karnataka flood, we raised a relief fund of 4 Crore. Later Karnataka Govt established KSDMA under the Disaster Management Act, 2005, Central Act and appointed me as a member in recognition of my work in the field of disaster response and relief.

34. How do you think corruption should be stopped?

Stop bribing. If you abide by the law, you can get things done without paying anything as bribe. This is where education has a great role to play.

35. Define social responsibility or academic responsibility for educational institutions.

Providing education is the basic / primary responsibility. As it has been commercialized, institutions should look for portfolio to serve.

As far as SET is concerned, it has provided collecting and lending hands for relief fund for natural disasters such as tsunami and floods at Mantralaya. It is also training and providing socially productive citizens to the society under the banner NSS and NCC.

SET is also an active member in donating blood for Red Cross Society every year.

Rajesh .S, ***III BBM***
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Seshadripuram Institute of Commerce and Management, Bengaluru

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Dr. Wooday P.Krishna is a technocrat, an accomplished educationist and a committed social worker. His personality has been enriched from the experiences he derived while serving in many institutions. This anthology has diverse articles written by him occasionally while serving multidimensional professions. They include letters written for 'readers' column in newspapers on public interest, research articles on engineering, education, spiritualism and social service and thoughts on Gandhiji too. The speeches delivered on various occasions in his different capacities and interactions which dwell upon his ideals and thoughts, have enriched the worth of the book.

The book is endowed with a dimension of his interactions, meetings, conferences with different individuals in his association with diverse organizations such as the Indian Red Cross Society, Karnataka Gandhi Smarak Nidhi, Gandhi Peace Foundation, Tuberculosis Association of India, Karnataka State Disaster Management Authority, Youth Hostels Association of India, and Seshadripuram Educational Institutions. The research articles on engineering depict his insight and scientific thinking.

The awards and honours bestowed upon him by the central and state governments are a testimony of his achievements before completion of half a century of age. It is hoped that the contents will enhance the intellect and rational thinking of the reader.

- G.S. Ujjanappa

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